BRITISH STANDARD

BS 3811 : 1993

Glossary of

Terms used in terotechnology

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BSI STANDARDS

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Contents

Foreword

This British Standard has been prepared under the direction of the Quality, Management and Statistics Standards Policy Committee. It is a revision of BS 3811 : 1984 which is withdrawn.

The first edition of BS 3811, published in 1964, dealt with the general terminology used in a maintenance organization. The second edition of 1974 and the third edition of 1984 defined 47 and 173 terms respectively and concentrated on the terminology used by maintenance managers in the context of terotechnology. Maintenance and management of the maintenance function continue to be very important facets of terotechnology, therefore this standard defines a comprehensive list of maintenance terms. The scope of this revision of BS 3811 is not however restricted to maintenance terminology; it has been greatly expanded to encompass the wide range of techniques encountered in the application of terotechnology. Further guidance on these techniques is given in BS 3843 : Parts 1, 2 and 3.

In recent years there have been significant developments in statutory and other requirements, for example, in the field of environmental management, and the relevant terms have been included in this standard where applicable.

Since the last revision of BS 3811, many glossaries have undergone major revisions, especially international glossaries. In common with these other glossaries, this revision of BS 3811 seeks to ensure, as far as possible, that definitions of terms are aligned with those agreed in international standards such as the International Electrotechnical Vocabulary (IEV).

Where no precedence currently exists in international standards, commonality with relevant British Standard glossaries has been sought as far as possible. Reference to these glossaries is made in this standard where applicable.

Use of the term 'defect.' This standard quotes from BS 4778 : Section 3.2 : 1991, which is identical with the International Electrotechnical Vocabulary, Chapter 191 (IEC 50(191) : 1991), the definition of 'defect'. It is crucial to note that the term 'defect' has recently been adopted in legislation and, in every case, relates to the lack of safety. Due to these legal connotations it is recommended that the term 'defect' should be used with extreme care. It should *not* be used in any document or note (even a personal note), except in circumstances where the legal definition is clearly and unarguably applicable.

Throughout this standard use of the pronouns he, him and his is intended to be non-gender specific.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Introduction

An essential requirement for the effective implementation of terotechnology is that all departments of the organization concerned and all personnel of the various professional disciplines should contribute to corporate decision making. To achieve this, the participants in the decision making process need to have a proper mutual appreciation of their respective tasks and requirements and they need to communicate with people at all levels of the organization. The purpose of this standard is to ensure that such communications are correctly understood by promoting the use of a standardized terminology for the application of terotechnology.

Terotechnology has a very wide remit and calls for the implementation of all disciplines aimed at improving performance. Many of these disciplines, such as management services, have been dealt with in depth in other British and international standards, and glossaries already exist for these subjects. This standard defines the principal terms likely to be encountered by a manager taking a terotechnological overview. If greater depth of understanding of these disciplines is required, the detailed glossaries of the subjects concerned should be consulted. Such standards are listed in annex A.

The terms in this standard are arranged in a classified order, each term having an individual number consisting of four digits. The first digit represents the number of the section and the other three digits represent the place the term occupies within that section.

Section **1** contains the fundamental definition of terotechnology, together with the definitions of the generic terms that are used extensively in BS 3843. The other terms used in terotechnology, which are wide ranging, have been allocated to sections **2** to **6**. Each of these sections covers the terms normally encountered in a specific phase of a project as follows:

section **1** defines the fundamental and generic terms that are used in terotechnology;

section **2** defines terms that initially arise in the concept and acquisition phases;

section **3** defines operational terms pertaining to the useful life phase;

section **4** defines maintenance terms pertaining to the useful life phase;

section **5** defines terms relating to the end of life of the project;

section **6** defines terms that are not related to any specific phase of a project.

To ensure the widest possible agreement on terms and definitions it is essential that, where a term and its definition already exist in an international glossary, it should be promoted nationally. This standard has therefore adopted the appropriate IEC or ISO definition where applicable. In the fields of availability, reliability and maintainability the principal source was IEV Chapter 191 (IEC 50(191) : 1991), which is identical with BS 4778 : Part 3 : Section 3.2 : 1991. Similarly for quality terms, the authoritative source was ISO 8402 : 1986, which is identical with BS 4778 : Part 1 : 1987. Where terms are not contained in an international standard, but have already been defined in a British Standard these have also been used to form the definitions given in this standard. Wherever in this standard such a source has been indicated, it is the basis of the definition given and in many cases the definition in the source document is given verbatim. In this standard the sources of individual definitions are given in the column headed 'Source' by codes that have the following meanings:

2382/1	BS ISO/IEC 2382/1 : 1984
2382-12	BS ISO/IEC 2382-12 : 1988
3138	BS 3138 : 1992
3811	BS 3811 : 1984 (withdrawn)
4335	BS 4335 : 1987
4778/1	BS 4778 : Part 1 : 1986 (identical with ISO 8402 : 1986)
4778/2	BS 4778 : Part 2 : 1991
4778/3.1	BS 4778 : Section 3.1 : 1991
4778/3.2	BS 4778 : Section 3.2 : 1991 (identical with IEV, Chapter 191)
5191	BS 5191 : 1975
5233	BS 5233 : 1986
5532	BS 5532 : Part 1 : 1978
45020	BS EN 45020 : 1993
EOQ	*Glossary of terms used in the management of quality*

Whenever possible in this standard, only one term is used for each definition. However, where there are synonymous terms, both terms are given. Alternative terms are given in medium type below the preferred terms with their status indicated, e.g. deprecated. These terms are not individually numbered, but are included in the index with a reference to the preferred term. Terms of more than one word e.g. 'approved concept', are written in a direct style, not as 'concept, approved'. The inverted term is included in the alphabetical index with a reference to the direct term.

Italicized words in the definitions indicate terms that are defined elsewhere in this standard.

NOTE. Where definitions use terms that are not themselves defined, reference should be made to the source document quoted. Terotechnology as such has not been dealt with internationally, thus many of the terms have had to be defined by the BSI Technical Committee responsible for this standard.

Section 1. Basic terotechnology terms

No.	Term	Source	Definition
1.1 Fundamental definition			
1101	**terotechnology**		A combination of management, financial, engineering, building and other practices applied to physical *assets* in pursuit of economic *life cycle costs*. NOTE 1. Terotechnology is concerned with the *specification* and *design for reliability* and *maintainability* of physical *assets* such as plant, machinery, equipment, buildings and structures. The application of terotechnology also takes into account the processes of installation, *commissioning*, *operation*, *maintenance*, *modification* and replacement. Decisions are influenced by *feedback* of information on design, performance and *costs*, throughout the *life cycle* of a *project*. NOTE 2. Terotechnology applies equally to both *assets* and *products* because the *product* of one organization often becomes the *asset* of another. Even if the *product* is a simple consumer *item* its design and *customer* appeal will benefit from terotechnology and this will reflect in improved market security for the producer.
1.2 Generic terms			
1201	**approved concept**		A *concept* accepted by the *user*, after *evaluation*, for implementation.
1202	**asset**		The buildings, plant, machinery and other permanent *items* required by the *user* to produce and supply the *product*. NOTE. *Terotechnology* clearly distinguishes this specialized meaning from its more general meaning.
1203	**concept**		A perceived possible *project* and the methods and *assets* required to achieve this. NOTE. The concept should include the identification of *assets* required to produce a required *output* and a forecast of the financial implications over the complete *project*'s *life cycle*.
1204	**customer**		The intended recipient of the *product*.
1205	**entity; item**		Any element that can be considered individually.
1206	**feed**		The 'raw' material or goods from which the *user* produces the *product* within, or by the use of, an *asset*.
1207	**life cycle**		The time interval that commences with the initiation of the *concept* and terminates with the *disposal* of the *asset*.
1208	**output**		A quantitative and qualitative measure of the *product* produced.

No.	Term	Source	Definition
1209	**product**		The specific material *item(s)* or *service(s)* to be supplied.
1210	**project**		The planning and implementation of an *approved concept* from initial acceptance, through the *life cycle* until the *asset* is disposed of. NOTE. In other contexts a project may last only until the delivery or *commissioning* of the *asset*.
1211	**service**		1) The supply to a *customer* of a *product* or utility that is not of a physical nature, this could include public, social and commercial assistance. NOTE 1. Examples of the diverse range of services include law enforcement, insurance, electricity supply, hairdressing, tax collection, welfare benefits and medical treatment. 2) The results generated by activities at the interface between the *supplier* and the *customer*, and by *supplier* internal activities to meet the *customer* needs. NOTE 2. The *supplier* or the *customer* may be represented at the interface by personnel or equipment. NOTE 3. *Customer* activities at the interface with the *supplier* may be essential to the service delivery. NOTE 4. Delivery or use of tangible *products* may form part of the service delivery. NOTE 5. A service may be linked with the manufacture and supply of a tangible *product*. 3) In the context of connections to plant or equipment or any other *asset*, the supplies of energy (e.g. electricity) or fluids (e.g. water, gases, compressed air) needed for the functioning of the plant, etc. NOTE 6. In this context the term is usually used in the plural as a collective term for these individual supplies. 4) To carry out routine activities necessary to keep an *item* in operating condition.
1212	**supplier; vendor**		The provider of the *asset* to the *user*. NOTE 1. *Terotechnology* clearly distinguishes this specialized meaning from its more general meaning. The supplier, as used in the wider sense, may be defined as 'the organization that provides a *product* to the *customer*'. NOTE 2. In a contractual situation the supplier may be called the contractor. NOTE 3. The supplier may be, for example, the producer, distributor, importer, assembler, or *service* organization. NOTE 4. The supplier can be either external or internal.
1213	**user**		The individual who, or organization that, operates or uses the *product*. NOTE. *Terotechnology* clearly distinguishes this specialized meaning from its more general meaning.

Section 2. Terms initially arising in the concept and acquisition phases

No.	Term	Source	Definition
2.1 Economic appraisal terms			
2101	**acquisition costs**	3811	The total *cost* of acquiring an *item* of material (the *asset*) and bringing it to the condition where it is capable of performing its intended function. NOTE. This includes the financial effects of activities involving the purchase of goods and *services* and/or providing necessary goods and *services* internally.
2102	**assessment**		The determination of values to be ascribed to *items*, activities or *elements of cost*.
2103	**capital cost**	4778/3.1	The total *cost* to the owner of acquiring an *item* and bringing it to the condition where it is capable of performing its intended function. NOTE 1.[1)] Capital cost is usually restricted to those *costs* that are capitalized in the accounts. NOTE 2.[1)] This term should not be confused with *cost* of capital, which is the *cost* of financing a proposed *project*.
2104	**cost(s)**	4778/2	The expenditure (actual or notional) incurred on, or attributable to, a given thing. NOTE. The basis of cost can be so variable that whenever possible it should be qualified as to its nature or limitations, for example historical, variable. Costs should also be related to a particular thing or 'object of thought', for example a given quantity or unit of goods made or *services* performed.
2105	**cost benefit analysis** **CBA** *abbreviation*		An *assessment* of the desirability of *projects*, where the indirect effects on third parties outside those affecting the decision making process, are taken into account.
2106	**cost function**	EOQ	An expression of the way *cost* varies with a given parameter.
2107	**discounted cash flow** **DCF** *abbreviation*	3138	The *concept* of relating cash inflows and outflows over the life of a *project* or *operation* to a common base value (for example present value), using discount rates based on compound interest.
2108	**disposal costs**	3811	The net total *costs* of disposing of an *item* of material when it has failed or is no longer required for any reason. NOTE. These *costs* may be either positive or negative.
2109	**elements of cost**	3811	All those *items* that are considered or arise individually and that are combined together to form the total *cost(s)*.

[1)] This note does not form part of the BS 4778 : Section 3.1 definition.

No.	Term	Source	Definition
2110	**estimate**	4778/3.2	1) An *operation*, or the result of this *operation*, made for the purpose of assigning, from the observed values in a sample, numerical values to the parameters of the distribution chosen as the statistical *model* of the population from which this sample is taken. 2) A representative value of a parameter for a particular purpose. NOTE. This value need not be derived by valid statistical analysis but may be one that is suitable for the argument being put forward.
2111	**investment appraisal**		An *assessment* of expenditure and income for a *project*, to determine its financial desirability.
2112	**life cycle costing**	3811	The technique of considering *life cycle costs*.
2113	**life cycle cost**	4778/3.1	The total *cost* of ownership of an *item* taking into account all the *costs* of acquisition, personnel training, *operation*, *maintenance*, *modification* and *disposal*. NOTE. Consideration of life cycle costs may be important in making decisions on new or changed requirements and as a control mechanism in *service*, for existing and future *items*.
2114	**life cycle cost model**	3811	A mathematical *model* designed to estimate the *life cycle cost* of an *asset*.
2115	**life cycle cost trade-off**	3811	The pursuit of a reduced, or at best minimized, *life cycle cost* by selection of appropriate design, *operation* and support characteristics.
2116	**maintenance cost**	4778/3.1	The total *cost* of retaining an *item* in, or restoring it to, a state in which it can perform its required function.
2117	**model**	3138	1) A simplification of a reality or a representation of a situation using graphical, verbal or mathematical symbols, electronic or physical means by which the situation can be examined, manipulated and evaluated. 2) A representation in some way of the physical or economic set of circumstances.
2118	**net present value** **NPV** *abbreviation*		The aggregate of future income and expenditure discounted back to a common base date, usually the present, at a given compound interest rate. NOTE. Choice and *evaluation* of competing solutions should take account of net present value and changing price levels where this can be done.
2119	**optimization**	3811	Finding the best procedure, policy or *maintenance* interval with respect to specified criteria.

No.	Term	Source	Definition
2120	**optimized life cycle costs**		The least *costs* that provide the maximum benefit from an *asset* over the *life cycle* period.
2121	**regression analysis**	3138	A method of calculating a possible relationship between one set of values and another set of values on which the first set is believed to depend.
2122	**running costs; operating costs** costs in use *deprecated*	3811	The total *costs* to the owner or *user* of the *operation*, *maintenance* and revenue funded *modification* of an *item*, system or *asset*. NOTE. The term 'costs in use' is normally applied to buildings.
2123	**sensitivity analysis**		An *examination* of the effects of selected values of varying parameters within a system.

2.2 Management accounting terms

NOTE. The following terms are also applicable.
2104 cost
2106 cost function
2109 elements of cost
2110 estimate
2122 running costs

2201	**appraisal costs**	4778/2	The *cost* of assessing the quality achieved. NOTE. Appraisal costs can include the *cost* of inspecting, testing, etc. carried out during, and on completion of, manufacture.
2202	**budget centre**		A section of an organization for which control may be exercised through budgets.
2203	**budgetary control**		The establishment of financial accountability, relating the responsibilities of executives to the requirements of a policy; and the continuous comparison of actual financial expenditure with that planned, either to secure by individual *action* the objective of that policy or provide a basis for its revision.
2204	**cost centre**	5191	A location, person or *item* of equipment (or group of these) in respect of which *costs* may be ascertained and related to *cost* units, e.g. process cost centre, production cost centre, service cost centre.
2205	**cost control**	3811	The regulation by management *action* of the *costs* of operating an undertaking, particularly where such *action* is guided by *cost* accounting.

No.	Term	Source	Definition
2206	**cost of scrap**	3138	The net *costs* associated with the production and *disposal* of rejected *output*. NOTE. Net *costs* may include labour, material and processing *costs* less any income from the sale of *scrap*.
2207	**costing methods**	3811	All those methods and techniques used in *cost control*.
2208	**economic quality level**	4778/2	The economic level of quality at which the *cost* of securing higher quality would exceed the benefits of the improved quality.
2209	**external failure cost**	4778/2	The *cost* arising outside an organization due to the failure to achieve the quality specified. NOTE. The term can include the *costs* of claims against warranty, replacement and consequential losses of custom and goodwill.
2210	**internal failure cost**	4778/2	The *cost* arising within an organization due to the failure to achieve the quality specified. NOTE. The term can include the *cost of scrap*, rework and re-*inspection* and also consequential losses within the organization.
2211	**prevention cost**	4778/2	The *cost* of any *action* taken to prevent or reduce *faults* and *failures*. NOTE. Prevention costs can include the *cost* of planning, setting up and maintaining the *quality control* system.
2212	**profit centre**		A part of a business responsible for *costs* and revenues.
2213	**quality related cost**	4778/2	The expenditure incurred in *defect* prevention and appraisal activities plus the losses due to internal and external *failure*.
2214	**value of stock**	5191	The amount of *stock* measured in monetary units.

2.3 Quality control terms

NOTE. The following terms are also applicable.

2201 appraisal costs
2208 economic quality level
2209 external failure cost
2210 internal failure cost
2211 prevention cost
2213 quality related cost

2301	**acceptable condition**	3811	The condition of an item agreed for each particular usage. NOTE. Attention is drawn to the fact that statutory requirements may exist governing minimum acceptable conditions.

No.	Term	Source	Definition
2302	**blemish**	EOQ	An *imperfection*, that occurs with a severity sufficient to cause awareness, but that should not cause any real impairment with respect to intended normal, or reasonably foreseeable, usage requirements. NOTE. The term blemish is appropriate for use when a quality characteristic of a *product* or *service* is evaluated in terms of *customer* awareness (as contrasted to simply *conformity* to *specifications*). There may be synonyms for blemish more appropriate to particular *products* or *services*.
2303	**blemished unit**	EOQ	A unit of *product* or *service* containing at least one *blemish*.
2304	**calibration**		All the *operations* for the purpose of determining the values of the errors of a measuring instrument (and, if necessary, to determine other metrological properties). NOTE 1. The metrological usage of the term calibration is often extended to include *operations* such as adjustment, gauging, scale graduation, etc.
2305	**certification**		A procedure by which a third party gives written assurance that a *product*, process or *service* conforms to specified requirements. NOTE 1. The term certification should not be used in the context of second or first parties, see **2314**. NOTE 2. Certification is an area where *quality assurance* impinges on regulations, approvals and requirements for manufacturers to satisfy legal obligations. It is a means by which a producer can demonstrate *compliance* with these constraints.
2306	**compliance**	EOQ	An affirmative indication or judgement that the *supplier* of a *product* or *service* has met the requirements of the relevant *specifications*, contract or regulation; also the state of meeting the requirements. NOTE. The expressions 'complies with' and 'conforms to' are not quite synonymous. For clarity and consistency of usage, conformity should be treated as the attribute of a product, material processes, services or system resulting from compliance by a person or body with a specification, contract or regulation.
2307	**conformity**		An affirmative indication or judgement that a *product* or *service* has met the requirements of the relevant *specifications*, contract or regulation; also the state of meeting the requirements. NOTE. In *quality control* usage, conformity customarily refers to an *assessment* not dependent on the passage of time in *product* use, as contrasted to *reliability* that has a time connotation. See also the note to **2306**.

No.	Term	Source	Definition
2308	**defect**	4778/1	The non-fulfilment of an intended requirement or an expectation for an *entity*, including one concerned with *safety*. NOTE 1. The requirement or expectation should be reasonable under the existing circumstances. NOTE 2. This term has been defined in recent legislation where its application is restricted to those *faults* that may cause the *risk* of harm or death to persons. In order to avoid the chance of the term being misunderstood or misinterpreted it is strongly recommended that the term 'defect' should not be used except where this legal interpretation is unarguably applicable. See also **3.1** in BS 4778 : Section 3.1 : 1991 and the foreword of this standard. Alternative terms that accurately represent the state or event should be used, e.g. *blemish*, *imperfection*, *nonconformity* or *failure*. Notes 3 and 4 are taken from the source document on which the above definition is based. NOTE 3. The definition covers the departure or absence of one or more quality characteristics from intended usage requirements. NOTE 4. The basic difference between *nonconformity* and defect is that specified requirements may differ from the requirements for the intended use.
2309	**imperfection**	EOQ	A departure of a quality characteristic from its intended level or state without any association with *conformity* to *specification* requirements or to the usability of a *product* or *service*. NOTE 1. Usually imperfections are rated on a severity scale or measured as deviations and, unless of high severity or magnitude, are to be reasonably expected in a *product* or *service* of acceptable quality. NOTE 2. An alternative term for imperfection is quality characteristic departure. NOTE 3. For quality characteristics, where there is no designated intended level, so that a departure is not definable, observed measurements serve the same role as imperfection in providing information. In some cases where the differences become part of the *product* description, it may be more appropriate to use a term such as variant. NOTE 4. The term imperfection is a general *classification*. Each imperfection type is usually identified by its specific name (e.g. scratch, weight, missing part). The severity or magnitude indicator may be a measurement deviation, a 'guide' identification or some other appropriate scale rating. Some imperfections may involve a large number of severity or magnitude *classifications* while others, such as a missing part, may involve only one. NOTE 5. The very existence of a specified tolerance is recognition that achieving 'perfection' for every quality characteristic is essentially impractical on an economic basis and, under usual circumstances, impossible in a physical sense. In many situations 'perfection' cannot be defined other than as some desired aim.

No.	Term	Source	Definition
2310	**nonconformity**	4778/1	The non-fulfilment of a specified requirement. NOTE 1. The definition covers the departure or absence of one or more quality characteristics, including *dependability* characteristics, or quality system elements, from specified requirements. NOTE 2. The basic difference between nonconformity and *defect* is that specified requirements may differ from the requirements for the intended use. NOTE 3. See also **2308**.
2311	**quality assurance**	4778/2	All those planned and systematic *actions* necessary to provide adequate confidence that a *product* or *service* will satisfy given requirements for quality. NOTE 1. Unless given requirements fully reflect the needs of the *user*, quality assurance is not complete. NOTE 2. For effectiveness, quality assurance usually requires a continuing *evaluation* of factors that affect the adequacy of the design or *specification* for intended applications as well as verifications and *audits* of production, installation and *inspection operations*. Providing confidence may involve producing evidence. NOTE 3. Within an organization, quality assurance serves as a management tool. In contractual situations, quality assurance also serves to provide confidence in the *supplier*.
2312	**quality control**	4778/1	The techniques and activities that are used to fulfil requirements for quality. NOTE 1. In order to avoid confusion, care should be taken to include a modifying term when referring to a subset of quality control, such as manufacturing quality control, or when referring to a broader *concept*, such as company-wide quality control. NOTE 2. Quality control involves operational techniques and activities aimed both at *monitoring* a process and at eliminating causes of unsatisfactory performance at relevant stages of the quality loop (quality spiral) in order to result in economic effectiveness.
2313	**specification**	4778/1	The document that prescribes the requirements to which the *product* or *service* has to conform. NOTE. A specification should refer to, or include drawings, patterns or other relevant documents and should also indicate the means and the criteria whereby conformity can be checked.
2314	**supplier's declaration**		A procedure by which a *supplier* gives written assurance that a *product*, process or *service* conforms to specified requirements. NOTE. In order to avoid any confusion, the expression self-certification should not be used.
2315	**test**	45020	Technical *operation* that consists of the determination of one or more characteristics of a given *product*, process or *service* according to a specified procedure.

No.	Term	Source	Definition

2.4 Supply and erection/installation terms

NOTE. The following terms are also applicable.
1211 service
2313 specification

2401	**commissioning**		Advancement of an installation from the stage of static completion to full working order and achievement of the specified operational requirements.
2402	**installation instructions**	3811	The document that describes in detail the procedure for installing the *product* including, if necessary, the procedure for unpacking and preparation prior to installation. NOTE. This document forms part of the *technical manual*.
2403	**network analysis; network techniques**	4335	A group of techniques, for the description, analysis, planning and control of activities, that considers the logical interrelationships of all activities. NOTE 1. The group includes techniques concerned with time, resources, *costs* and other influencing factors, e.g. uncertainty. NOTE 2. The terms programme evaluation and review technique (PERT), critical path analysis (CPA), critical path method (CPM) and precedence method refer to particular techniques and should not be used as synonyms for network analysis.
2404	**on stream**		The state of the *asset* in which it is performing its intended function. NOTE. The term originates from, and is particularly applied in, processes.
2405	**procurement**		The process of obtaining goods, materials and *services* from an internal or external *supplier*. This process includes the managerial, technical, contractual and physical *actions* required to control the *availability* and ordering of such requirements.
2406	**tender**		An offer, normally in writing, to supply a commodity or to execute works, giving price and *compliance* with a *specification*.
2407	**vendor assessment**		The *assessment* by or for a *customer* of potential *suppliers* with regard to their technical ability and financial ability/stability, and in other respects, to determine their suitability as *suppliers*.

No.	Term	Source	Definition
2.5 Environmental implication terms			
2501	**aesthetics**		Set of principles of good taste and appreciation of beauty.
2502	**degradable**		Capable of degrading to a condition similar to that of naturally occurring substances.
2503	**effluent**		A stream of fluid being released or discharged to the environment.
2504	**fully treated**		Of *effluent* or *waste*. *Treated* chemically or by other processes to a state where it has no significant adverse effect on the environment.
2505	**fume**		An odorous or *noxious* smoke, vapour, gas or aerosol emitted to the atmosphere.
2506	**noxious**		Harmful or unwholesome.
2507	**poisonous substance; toxic substance**		A substance that, when introduced into or absorbed by a living organism (usually a human being), destroys life or injures health.
2508	**solvent**		A liquid capable of dissolving specific materials.
2509	**threshold limit**		A limiting concentration of a substance or intensity of a radiation in an environment beyond which adverse effects may be expected. NOTE. This term specially applies to limits set by statutory bodies to ensure that the adverse effects are prevented.
2510	**treated**		Of matter or *effluent* being disposed of. Subjected to chemical or other *treatment* to render it less harmful.
2511	**treatment**		The *action* of reprocessing a material or *effluent* to render it less harmful or more suitable for its intended purpose.
2512	**visual impact**		The qualitative emotional reaction to something that is, or could be, seen.
2513	**waste disposal**		The activity of disposing of material no longer required.
2514	**waste storage**		The storage of material no longer required, prior to *disposal*.

No.	Term	Source	Definition

2.6 Terms used in the design of a product or asset

NOTE. The following term is also applicable.
2501 aesthetics

2601	**active redundancy**	4778/3.2	That *redundancy* wherein all means for performing a required function are intended to operate simultaneously.
2602	**criticality analysis**		A quantitative analysis of events or *faults* and the ranking of these in order of the seriousness of their consequences.
2603	**design audit**		A formal and systematic analysis of a proposed design for, or on behalf of, the *user* or *user* organization to ascertain that the *user*'s requirements are, or will be, met.
2604	**design review**		A documented, comprehensive and systematic critique of a design, for or on behalf of the *supplier*, to: a) evaluate the design, its requirements and its implementation; b) identify problems, if any and to propose solutions. NOTE. The design requirements include all those that concern an *entity* at all stages of the quality loop and at all phases of its *life cycle*.
2605	**ergonomics**	3138	The study of the relationship between workers and their occupation, equipment and environment and particularly the application of anatomical, physiological and psychological knowledge to the problems arising therefrom.
2606	**fail-safe**	4778/3.2	A design property of an *item* which prevents its *failures* from resulting in critical *faults*.
2607	**fault modes and effects analysis** **FMEA** *abbreviation* failure modes and effects analysis *deprecated*	4778/3.2	A qualitative method of *reliability* analysis which involves the study of the *fault* modes which can exist in every subitem of the *item* and the determination of the effects of each *fault* mode on other subitems of the *item* and on the required functions of the *item*.
2608	**fault modes, effects and criticality analysis** **FMECA** *abbreviation* failure modes, effects and criticality analysis *deprecated*	4778/3.2	A qualitative method of *reliability* analysis which involves a *fault modes and effects analysis* together with a consideration of the probability of *failure* modes, their occurrence and of the ranking of effects and the seriousness of the *faults*.

No.	Term	Source	Definition
2609	**market research**		The process of making investigations into the characteristics of given markets, for example, location, size, growth potential and observed attitudes.
2610	**marketing**		The management process responsible for identifying, anticipating and satisfying the *customers'* perceived and latent requirements profitably.
2611	**product liability**		The liability of a *supplier* in statute or common law for his *product*.
2612	**redundancy**	4778/3.2	In an *item*. The existence of more than one means for performing a required function.
2613	**standby redundancy**	4778/3.2	That *redundancy* wherein a part of the means for performing a required function is intended to operate, while the remaining part(s) of the means are inoperative until needed.
2614	**statutory liability**		The liability of the *supplier* for his *products* to conform to the requirements of the law.

Section 3. Operational terms related to the period-of-use phase

No.	Term	Source	Definition
NOTE. The following term is also applicable. 2503 effluent			

3.1 Operation terms

3101	**accumulated down time**	4778/3.2	The accumulated time during which an *item* is in a *down state* over a given time interval.
3102	**action**		Performing one or more activities, *steps* or *tasks* to achieve an objective.
3103	**available state**	4778/3.1	The state of an *item* when it is capable of performing its required functions in the defined condition of use.
3104	**busy state**	4778/3.2	The state of an *item* in which it performs a required function for a *user* and for that reason is not accessible by other *users*.
3105	**critical state**	4778/3.2	A state of an *item* assessed as likely to result in injury to persons, significant material damage or other unacceptable consequences. NOTE. A critical state may be the result of a critical *fault*, but not necessarily.
3106	**disabled state; outage**	4778/3.2	A state of an *item* characterized by its inability to perform a required function for any reason.
3107	**disabled time**	4778/3.2	The time interval during which an *item* is in a *disabled state*.
3108	**down state; internal disabled state**	4778/3.2	A state of an *item* characterized either by a *fault*, or by a possible inability to perform a required function during *preventive maintenance*.
3109	**down time**	4778/3.2	The time interval during which an *item* is in a *down state*.
3110	**drill**	4884/1	A mandatory procedure.
3111	**external disabled state**	4778/3.2	That subset of the *disabled state* when the *item* is in an *up state*, but lacks required external resources or is disabled due to other planned *actions* than *maintenance*.
3112	**external disabled time; external loss time**	4778/3.2	The time interval during which an *item* is in an *external disabled state*.

No.	Term	Source	Definition
3113	**forced outage**	3811	*Outage* due to the unscheduled putting out of *service* of an *item*. NOTE. This term is used in the electricity supply industry.
3114	**idle state;** **free state**	4778/3.2	A non-operating *up state* during *non-required time*.
3115	**idle time;** **free time**	4778/3.2	The time interval during which an *item* is in a *free state*.
3116	**monitoring;** **supervision**	4778/3.2	Activity, performed either manually or automatically, intended to observe the state of an *item*.
3117	**non-operating state**	4778/3.2	The state when an *item* is not performing a required function.
3118	**non-operating time**	4778/3.2	The time interval during which an *item* is in a *non-operating state*.
3119	**non-required time**	4778/3.2	The time interval during which the *user* does not require the *item* to be in a condition to perform a required function.
3120	**operating instructions**	3811	The document that describes in detail the methods of starting up, shutting down, controlling and *monitoring* the *asset* under all foreseeable conditions. NOTE. The document forms part of the *technical manual*.
3121	**operating procedure**		The sequence of *actions* to be performed on or by an *asset* to achieve a required function.
3122	**operating state**	4778/3.2	The state when an *item* is performing a required function.
3123	**operating time**	4778/3.2	The time interval during which an *item* is in an *operating state*.
3124	**operation**	4778/3.2	The combination of all technical and administrative *actions* intended to enable an *item* to perform a required function, recognizing necessary adaptation to changes in external conditions. NOTE. By external conditions are understood, for example, *service* demand and environmental conditions.
3125	**outage rate**	3811	For a particular class of *outage* and a specified period of time. The quotient of the number of *outages* to the *up time* for an *item*, for example *scheduled outage* rate, *forced outage* rate. NOTE. This term is used in the electricity supply industry.

No.	Term	Source	Definition
3126	**required time**	4778/3.2	The time interval during which the *user* requires the *item* to be in a condition to perform a required function.
3127	**scheduled outage** planned outage *deprecated*	3811	*Outage* due to the programmed taking out of *service* of an *item*. NOTE. The term scheduled outage is used in the electricity supply industry.
3128	**scheduled outage duration**	3811	Within a specified period of time, the period of time during which an *item* is not available to perform its function because it is withdrawn from *service* according to programme. NOTE. This term is used in the electricity supply industry.
3129	**standby state**	4778/3.2	A non-operating *up state* during the *required time*.
3130	**standby time**	4778/3.2	The time interval during which an *item* is in a *standby state*.
3131	**step**		A single identifiable *action* carried out as one element in a procedure or series of *actions*.
3132	**technical manual**	3811	A document that communicates appropriately and effectively specific direction, *data* and information about the *product* to cover the subjects of: a) purpose and planning (what the *product* is for); b) *operating instructions* (how to use the *product*); c) technical description (how the *product* works); d) handling, installation, storage, transit (how to prepare the *product* for use); e) *maintenance instructions* (how to keep the *product* working); f) *maintenance schedules* (what is done and when); g) *parts lists* (what the *product* consists of); h) *modification* instructions (how to change the *product*); i) *disposal instructions* (how to dispose of the *product*). NOTE 1. Technical manuals are provided for those involved with managing, operating, maintaining and provisioning for the complete *asset*. NOTE 2. See also BS 4884.

No.	Term	Source	Definition
3133	**up state**	4778/3.2	A state of an *item* characterized by the fact that it can perform a required function, assuming that the external resources, if required, are provided. NOTE. This state relates to *availability performance*.
3134	**up time**	4778/3.2	The time interval during which an *item* is in an *up state*.
3135	**waiting time**	3138	That part of attendance time other than unoccupied time during which a worker is available but is prevented from working.
3136	**waste**		By-products of manufacture or of a process. NOTE. Some waste *products* may be of further use after reprocessing, or may have a *disposal* value. Other waste may be useless or require special handling and *disposal* methods that will incur additional *costs*.

3.2 Performance terms

NOTE. The following term is also applicable.
3135 waiting time

3201	**availability (performance)**	4778/3.2	The ability of an *item* to be in a state to perform a required function under given conditions at a given instant of time or over a given time interval, assuming that the required external resources are provided. NOTE 1. This ability depends on the combined aspects of the *reliability performance*, the *maintainability* performance and the *maintenance support performance*. NOTE 2. Required external resources, other than *maintenance* resources, do not affect the availability performance of the *item*.
3202	**bad-as-old** **b.a.o.** *abbreviation*		Repaired in such a way that the *asset* is partially restored to its original condition while retaining some used or worn parts. NOTE 1. *Good-as-new* and bad-as-old are alternative *repair* options usually assumed in *models*, but in practice *maintenance* restores *items* to a condition that is neither *good-as-new* (*g.a.n.*) nor b.a.o. NOTE 2. *GAN* implies that *preventive maintenance* is as good as a renewal and the *item* clock is zeroed thereby. Under b.a.o. the *item* is restored as if the *failure* had not happened so that its propensity for future *failure* is the same as an *item* of the same age from new which has not failed.
3203	**breakdown**	3811	*Failure* resulting in the non-*availability* of an *item*. NOTE. See also **3201**.

No.	Term	Source	Definition
3204	**capability**		The ability of an *item* to meet a *service* demand of given quantitative characteristics under given conditions. NOTE 1. This may be any combination of faulty and correctly functioning subitems. NOTE 2. For telecommunication *services* this ability is called trafficability performance.
3205	**dependability**	4778/3.2	The collective term used to describe the *availability performance* and its influencing factors: *reliability performance, maintainability* performance and *maintenance support performance.* NOTE. Dependability is used only for general descriptions in non-quantitative terms.
3206	**durability**	4778/3.2	The ability of an *item* to perform a required function under given conditions of use and *maintenance*, until a limiting state is reached. NOTE. A limiting state of an *item* may be characterized by the end of the useful life, unsuitability for any economic or technological reasons or other relevant factors.
3207	**efficiency**		1) The ratio of useful work performed to the total energy expended. 2) A term expressed qualitatively to reflect the relationship between the *output* from, and the input to, an *item* or an activity.
3208	**good-as-new** **g.a.n.** *abbreviation*		Repaired in such a way that the *asset* is fully restored to its original condition. NOTE. See notes to **3202**.
3209	**history record**	4778/3.1	A *record* of the history of the *operation* of an *item* for use in the analysis and design of that *item.* NOTE. In design, the history record is used prior to testing and production to produce *failure* rates and to identify weaknesses or *risk* areas.
3210	**load factor**		The quotient of the *mean* actual load of a production resource (or group of production resources) or of a department (for example store or warehouse) and the available *mean* capacity during a particular period, which indicates the extent to which the capacity is used during a particular period. NOTE. In certain industries load factor is synonymous with *utilization.*

No.	Term	Source	Definition
3211	**operational research**	3138	The application of the methods of science to complex problems arising in the direction and management of large systems of people, machines, materials and money in industry, business, government and defence. NOTE. The distinctive approach is to develop a *model* of the system, incorporating measures of factors such as chance and *risk*, with which to predict and compare the outcomes of alternative decisions, strategies or controls. The purpose is to help management determine its policy and *action* scientifically.
3212	**utilization**		The actual usage of a resource compared with the maximum possible whilst it is available for use during a given period.

3.3 Reliability terms

NOTE. The following terms are also applicable.
2302 blemish
2308 defect

3301	**ageing failure; wearout failure**	4778/3.2	A *failure* whose probability of occurrence increases with the passage of time, as a result of processes inherent in the *item*.
3302	**critical failure**	4778/3.2	A *failure* which is assessed as likely to result in injury to persons, significant material damage or other unacceptable consequences.
3303	**design failure**	4778/3.2	A *failure* due to inadequate design of an *item*.
3304	**design for reliability**	3811	The process of *task* recognition and problem solving to enable an *item* to perform a required function under stated conditions for a stated period of time.
3305	**failure**	4778/3.2	The termination of the ability of an *item* to perform a required function. NOTE 1. After failure the *item* has a *fault*. NOTE 2. Failure is an event, as distinguished from *fault*, which is a state. NOTE 3. This *concept* as defined does not apply to *items* consisting of *software* only.
3306	**failure classification**	3811	The allocation of a *failure* to one of the *failure* types given in section **04** of BS 4778 : Section 3.2 : 1991.
3307	**failure mechanism**	4778/3.2	The physical, chemical or other process which has led to a *failure*.
3308	**failure report**	3811	A document reporting departure of an *item* from an *acceptable condition*.

No.	Term	Source	Definition
3309	**fault**	4778/3.2	The state of an *item* characterized by the inability to perform a required function, excluding the inability during *preventive maintenance* or other planned *actions*, or due to lack of external resources. NOTE. A fault is often the result of a *failure* of the *item* itself, but may exist without prior *failure*.
3310	**fault report; incident report**		A document reporting the detection of a *fault* or the occurrence of an incident, giving details of its nature, symptoms and consequences as far as is known.
3311	**manufacturing failure**	4778/3.2	A *failure* due to *nonconformity* during manufacture, to the design of an *item* or to specified manufacturing processes.
3312	**mishandling failure**	4778/3.2	A *failure* caused by incorrect handling or lack of care of the *item*.
3313	**misuse failure**	4778/3.2	A *failure* due to the application of stresses during use which exceed the stated capabilities of the *item*.
3314	**primary failure**	4778/3.2	A *failure* of an *item* not caused either directly or indirectly by a *failure* or a *fault* of another *item*.
3315	**reliability (performance)**	4778/3.2	The ability of an *item* to perform a required function under given conditions for a given time interval. NOTE 1. It is generally assumed that the *item* is in a state to perform this required function at the beginning of the time interval. NOTE 2. The term reliability is also used as a measure of reliability performance.
3316	**reliability characteristics**	3811	Quantities used to express *reliability* in numerical terms. NOTE. The characteristics of *reliability* are discussed in clause **14** of BS 4778 : Section 3.1 : 1991.
3317	**reliability data**	3811	*Data* on characteristics permitting quantitative *evaluation* of *reliability*. NOTE. Reliability data are discussed in clause **18** of BS 4778 : Section 3.1 : 1991.
3318	**reliability test**	3811	A critical trial or *examination* of an *item* to determine if it will perform a required function under stated conditions for a stated period of time.
3319	**weakness failure**	4778/3.2	A *failure* due to a weakness in the *item* itself when subjected to stresses within the stated capabilities of the *item*. NOTE. A weakness may be either inherent or induced.

No.	Term	Source	Definition

3.4 Safety terms

NOTE. The following term is also applicable.
2308 defect

3401	**caution**		A statement of the need to take care lest serious consequences result in harm to material *items* such as the *asset* or the *product*.
3402	**hazard**	4778/3.1	A situation that could occur during the lifetime of a *product*, system or plant that has the potential for human injury, damage to property, damage to the environment, or economic loss.
3403	**hazard analysis**	4778/3.1	The identification of *hazards* and the consequences of the credible accident sequences of each *hazard*.
3404	**major hazard**	4778/3.1	A large scale *hazard* which may have severe consequences.
3405	**permit to work**	3811	A signed document, authorizing access to an *item*, that defines conditions, including *safety* precautions, under which work may be carried out. This may include a document, signed on completion of *maintenance*, stating that an *item* is safe and ready for use.
3406	**potability**		The quality of a liquid (usually water) of being capable of being drunk without adverse effects on health.
3407	**risk**	4778/3.1	A combination of the probability, or frequency, of occurrence of a defined *hazard* and the magnitude of the consequences of the occurrence.
3408	**risk analysis; risk assessment**	4778/3.1	The integrated analysis of the *risks* inherent in a *product*, system or plant and their significance in an appropriate context.
3409	**safety**	4778/3.1	The freedom from unacceptable *risks* of personal harm. NOTE. Safety is defined in the context of *risk* of personal harm. It is traceable quantitatively in decision-making on acceptable *risks*.
3410	**safety audit**		Formal review of the *risks* of personal harm.
3411	**safety code**		Prescribed requirements or procedures aimed at avoiding *risks* of personal harm.
3412	**safety rule**		A regulation designed to enforce a *safety code*.

No.	Term	Source	Definition
3413	**warning**		A statement advising of the need to take care lest there be serious consequences resulting in death of personnel or in a *hazard* to health.

3.5 Energy management terms

3501	**degree day**	3811	The daily difference in degrees Celsius (or degrees Fahrenheit) between a base temperature of 15.5 °C (or 60 °F) and the 24 h *mean* outside temperature (when it falls below the base temperature). NOTE. Degree day figures provide a climatic correction for calculations of *efficiency* and enable an allowance for weather variation to be made when comparing the *efficiency* of a plant for one heating season with the *efficiency* of the same plant during a previous period.
3502	**energy audit**	3811	The determination of actual energy used in each part of an installation or process.
3503	**energy budget**	3811	The energy allowance for building or process purposes.
3504	**energy management**	3811	The management of the storage, conversion, distribution and *utilization* of energy directed to the economic provision of required *services* and the elimination of avoidable losses.
3505	**energy requirement**	3811	The summation of the amounts of energy used in a building or process.
3506	**energy target**	3811	The desired energy demand of a building or process.
3507	**heat gain**	3811	The flow of heat into an enclosure from all sources other than by space heating means.
3508	**heat loss**	3811	The rate of heat flow from a space.
3509	**heat reclaim**	3811	The principle whereby heat that might otherwise be discharged to *waste* is passed through a suitable form of heat exchanger and thereby recovered for other uses.
3510	**heat recovery**	3811	A process that enables *waste* heat to be stored or transferred for the purpose of performing a useful function elsewhere.

Section 4. Maintenance terms related to the period-of-use phase

No.	Term	Source	Definition

NOTE. The following terms are also applicable.

2315 test
2403 network analysis
3310 fault report; incidence report
3405 permit to work

4.1 Maintenance execution terms

4101	**active maintenance time**	4778/3.2	That part of the *maintenance time* during which a *maintenance action* is performed on an *item*, either automatically or manually, excluding *logistic delays*. NOTE. A *maintenance action* may be carried out while the *item* is performing a required function.
4102	**administrative delay**	4778/3.2	For *corrective maintenance*. The accumulated time during which an *action* of *corrective maintenance* on a faulty *item* is not performed due to administrative reasons.
4103	**check-out time**	4778/3.2	That part of *active corrective maintenance time* during which *function check-out* is performed.
4104	**clean**	3811	To reduce contamination to an acceptable level.
4105	**condition monitoring**	3811	The continuous or periodic measurement and interpretation of *data* to indicate the condition of an *item* to determine the need for *maintenance*. NOTE. Condition monitoring is normally carried out with the *item* in operation, in an operable state or removed but not subject to major dismantling.
4106	**diagnosis**	3811	The art or act of deciding from symptoms the nature of a *fault*.
4107	**diagnostic**	3811	Of or assisting *diagnosis*.
4108	**examination**	3811	A comprehensive *inspection* supplemented by measurement and physical testing in order to determine the condition of an *item*.
4109	**feedback**	3811	A written or oral report of the success or failure of an *action* to achieve its desired result that can be used to influence design, performance and *costs*.

No.	Term	Source	Definition
4110	**inspection**		*Examination* of a *product* design, *product, service* or plant and determination of their conformity with specific requirements, or (on the basis of professional judgement) general requirements. NOTE 1. Inspection of a process includes personnel, facilities, technology and methodology. NOTE 2. The results of inspection may be used to support *certification.*
4111	**job**	3138	1) All the *tasks* carried out by one or more workers and/or units of equipment in the completion of their prescribed duties and grouped together under one title or definition (e.g. as on a *work order*). 2) A defined area of accountability within an organization (e.g. as in 'my job').
4112	**job report**	3811	A statement recording the work done and the condition of the *item.*
4113	**logistic delay**	4778/3.2	That accumulated time during which a *maintenance action* cannot be performed due to the necessity to acquire *maintenance* resources, excluding any *administrative delay.* NOTE. Logistic delays can be due to, for example, travelling to unattended installations, pending arrival of spare parts, specialists, test equipment, information and suitable environmental conditions.
4114	**maintenance**	4778/3.2	The combination of all technical and administrative *actions*, including *supervision actions*, intended to retain an *item* in, or restore it to, a state in which it can perform a required function.
4115	**maintenance instructions**	3811	The document that describes in detail the procedure and circumstances for carrying out *maintenance.* NOTE. This document forms part of the *technical manual.*
4116	**maintenance time**	4778/3.2	The time interval during which a *maintenance action* is performed on an *item* either manually or automatically, including *technical delays* and *logistic delays.* NOTE. *Maintenance* may be carried out while the *item* is performing a required function.
4117	**overhaul**	3811	A comprehensive *examination* and *restoration* of an *item*, or a major part thereof, to an *acceptable condition.*
4118	**rehabilitation** refurbishment *deprecated*		Extensive work intended to bring plant or buildings up to current acceptable functional conditions, often involving *modifications* and improvements.

No.	Term	Source	Definition
4119	**repair**	4778/3.2	That part of *corrective maintenance* in which manual *actions* are performed on the *item*.
4120	**repair time**	4778/3.2	That part of *active corrective maintenance time* during which *repair actions* are performed on an *item*.
4121	**restoration;** **recovery**	4778/3.2	That event when the *item* regains the ability to perform a required function after a *fault*.
4122	**shortages time**	3811	The period of time during which the *item* is unable to perform due to shortages of labour, spares, facilities, movement, etc.
4123	**shutdown maintenance time**	3811	The period of time during which *maintenance* is carried out whilst the *item* is out of *service*. NOTE. The *item* may be out of *service* due to either a planned shutdown or a *breakdown*.
4124	**survey**	3811	An *examination*, the written report of which would include a recommendation for any *action* deemed necessary.
4125	**task**	4778/3.1	1) The smallest indivisible part of an activity when it is broken down to a level best understood and performed by a specific *user*.
		3138	2) An identifiable part of a *job*, comprising a combination of *operations*.
4126	**technical delay**	4778/3.2	The accumulated time necessary to perform auxiliary technical *actions* associated with the *maintenance action* itself.
4127	**tribology**		The science and technology of interacting surfaces in relative motion and of related subjects and practices.
4128	**work order** job card *deprecated*	3811	A written instruction detailing work to be carried out and methods to be used.
4129	**work requisition**	3811	A document requesting work to be carried out.
4130	**work specification**	3811	A document describing the way in which the work is to be carried out. It may define the materials, tools, time, standards.

No.	Term	Source	Definition
4131	**work study; organization and methods** **O & M** *abbreviation*	3138	The systematic *examination* of activities in order to improve the effective use of human and other resources. NOTE. Although the processes involved are identical, work study differs from organization and methods in that the latter is normally reserved for and applied to managerial, administrative and clerical work.

4.2 Maintenance management terms

NOTE. The following terms are also applicable.

3116 monitoring; supervision
3128 scheduled outage duration
3132 technical manual
3305 failure
3306 failure classification
3309 fault
3310 fault report; incidence report
4101 active maintenance time
4102 administrative delay
4103 check-out time
4113 logistic delay
4114 maintenance
4116 maintenance time
4119 repair
4121 restoration; recovery
4126 technical delay

4201	**active corrective maintenance time**	4778/3.2	That part of the *active maintenance time* during which *actions* of *corrective maintenance* are performed on an *item*.
4202	**active preventive maintenance time**	4778/3.2	That part of the *active maintenance time* during which *actions* of *preventive maintenance* are performed on an *item*.
4203	**automatic maintenance**	4778/3.2	*Maintenance* accomplished without human intervention.
4204	**condition appraisal**		A formal and systematic appraisal of the condition of an *item* in respect of its ability to perform its required function.
4205	**condition-based maintenance**	4778/3.1	The *maintenance* carried out according to the need indicated by *condition monitoring*.
4206	**consumable stock**	3811	Expendable materials (for example oils, lubricants, nails, packing) that are held available for *maintenance* purposes.

No.	Term	Source	Definition
4207	**controlled maintenance**	4778/3.2	A method to sustain a desired quality of *service* by the systematic application of analysis techniques using centralized supervisory facilities and/or sampling to minimize *preventive maintenance* and to reduce *corrective maintenance*.
4208	**corrective maintenance**	4778/3.2	The *maintenance* carried out after *fault recognition* and intended to put an *item* into a state in which it can perform a required function.
4209	**corrective maintenance time**	4778/3.2	That part of the *maintenance time* during which *corrective maintenance* is performed on an *item*, including *technical delays* and *logistic delays* inherent in *corrective maintenance*.
4210	**daywork**	3811	Charging for work for which control standards have been determined, for example quality, but that cannot readily be measured in accordance with general principles. NOTE. The normal practice is to *record* labour, materials and plant used as the work proceeds, and to charge at standard rates plus agreed overheads.
4211	**deferred maintenance**	4778/3.2	*Corrective maintenance* which is not immediately initiated after a *fault recognition* but is delayed in accordance with given *maintenance* rules.
4212	**elementary maintenance activity**	4778/3.2	A unit of work into which a *maintenance* activity may be broken down at a given *indenture level*.
4213	**emergency maintenance**	3811	The *maintenance* that it is necessary to put in hand immediately to avoid serious consequences.
4214	**fault correction**	4778/3.2	*Actions* taken after *fault localization* to restore the ability of the faulty *item* to perform a required function.
4215	**fault correction time**	4778/3.2	That part of *active corrective maintenance time* during which *fault correction* is performed.
4216	**fault diagnosis**	4778/3.2	*Actions* taken for *fault recognition*, *fault localization* and cause identification.
4217	**fault diagnosis time**	4778/3.2	The time during which *fault diagnosis* is performed.
4218	**fault localization** fault location *deprecated*	4778/3.2	*Actions* taken to identify the faulty subitem at the appropriate *indenture level*.

No.	Term	Source	Definition
4219	**fault localization time** fault location time *deprecated*	4778/3.2	That part of active *corrective maintenance* during which *fault localization* is performed.
4220	**fault recognition**	4778/3.2	The event of a *fault* being recognized.
4221	**forced outage duration**	3811	Within a specified period of time, the period of time during which an *item* is incapable of performing its function because of a *fault*. NOTE. This term is used in the electricity supply industry.
4222	**function-affecting maintenance**	4778/3.2	A *maintenance action* during which one or more required functions of the *item* under *maintenance* are interrupted or degraded.
4223	**function check-out**	4778/3.2	*Actions* taken after *fault correction* to verify that the *item* has recovered its ability to perform the required function.
4224	**function-degrading maintenance**	4778/3.2	*Function-affecting maintenance* that degrades one or more of the required functions of a maintained *item*, but not to such an extent as to cause complete loss of all the functions.
4225	**function-permitting maintenance**	4778/3.2	*Maintenance action* during which one of the required functions of the *item* under *maintenance* is interrupted or degraded.
4226	**function-preventing maintenance**	4778/3.2	*Function-affecting maintenance* that prevents a maintained *item* from performing a required function by causing complete loss of all the functions.
4227	**indenture level**	4778/3.2	For *maintenance*. A level of subdivision of an item from the point of view of a *maintenance action*. NOTE 1. Examples of indenture levels could be a subsystem, a circuit board, a component. NOTE 2. The indenture level depends on the complexity of the *item*'s construction, the *accessibility* to subitems, skill level of *maintenance* personnel, test equipment facilities, safety considerations, etc.
4228	**level of maintenance**	4778/3.2	The set of *maintenance actions* to be carried out at a specified *indenture level*. NOTE. Examples of a *maintenance action* are replacing a component, a printed circuit board, a subsystem.
4229	**maintenance action; maintenance task**	4778/3.2	A sequence of *elementary maintenance activities* carried out for a given purpose. NOTE. Examples are *fault diagnosis*, *fault localization*, *function check-out* or combinations thereof.

No.	Term	Source	Definition
4230	**maintenance echelon; line of maintenance**	4778/3.2	A position in an organization where specified *levels of maintenance* are to be carried out on an *item*. NOTE 1. Examples of maintenance echelons are: field, *repair* shop, manufacturer. NOTE 2. The maintenance echelon is characterized by the skill of the personnel, the facilities available, the location, etc.
4231	**maintenance entity**	4778/3.2	Any subitem of a given *item* which can have a *fault* and which, by alarm or any other means, can be unambiguously identified for replacement or *repair*.
4232	**maintenance history**	3811	A *record* of past *maintenance tasks* that is used for the purpose of *maintenance planning*.
4233	**maintenance management**	3811	The organization of *maintenance* within an agreed policy.
4234	**maintenance man-hours MMH** *abbreviation*	4778/3.2	The accumulated durations of the individual *maintenance times*, expressed in hours, used by all *maintenance* personnel for a given type of *maintenance action* or over a given time interval.
4235	**maintenance philosophy**	4778/3.2	A system of principles for the organization and execution of the *maintenance*.
4236	**maintenance planning**	3811	Deciding in advance the *jobs*, methods, materials, tools, machines, labour, time required and timing of *maintenance actions*.
4237	**maintenance policy**	4778/3.2	A description of the interrelationship between the *maintenance echelons*, the *indenture levels* and the *levels of maintenance* to be applied for the *maintenance* of an *item*.
4238	**maintenance programme**	3811	A time-based plan allocating specific *maintenance tasks* to specific periods.
4239	**maintenance requirements**	EOQ	A statement of the nature of the *maintenance* method, in particular the skill of the personnel involved, their facilities and the duration and frequency of *maintenance action*. NOTE 1. This information forms part of the *technical manual*. NOTE 2. Compare with **4304**.
4240	**maintenance support**	4778/3.2	The provision on demand of the resources required to maintain an *item* under a given *maintenance policy*.

No.	Term	Source	Definition
4241	**maintenance support performance**	4778/3.2	The ability of a *maintenance* organization, under given conditions, to provide upon demand, the resources required to maintain an *item*, under a given *maintenance policy*. NOTE. The given conditions are related to the *item* itself and to the conditions under which the *item* is used and maintained.
4242	**mean operating time between failures** **MTBF** *abbreviation*	4778/3.2	The expectation of the operating time between *failures*.
4243	**mean time between failures**	4778/3.2	The expectation of the time between *failures*. NOTE. The use of the abbreviation MTBF in this sense is now deprecated.
4244	**mean time to failure** **MTTF** *abbreviation*	4778/3.2	The expectation of the time to *failure*. NOTE. The term is normally used in connection with non-repairable *items*.
4245	**mean time to first failure** **MTTFF** *abbreviation*	4778/3.2	The expectation of the time to first *failure*.
4246	**mean time to restoration; mean time to recovery** **MTTR** *abbreviation* mean time to repair *deprecated*	4778/3.2	The expectation of the time to *restoration*.
4247	**modification**	4778/3.2	Of an *item*. The combination of all technical and administrative *actions* intended to change an *item*.
4248	**nugatory time** non-productive time *deprecated*	3811	That portion of time for which payment is made but for which no *service* is rendered.
4249	**off-site maintenance**	4778/3.2	*Maintenance* performed at a location different from that where the *item* is used. NOTE. An example of off-site maintenance is the *repair* of a subitem at a *maintenance* centre.
4250	**on-site maintenance; in situ maintenance; field maintenance**	4778/3.2	*Maintenance* performed at the location where the *item* is used.
4251	**opportunistic maintenance**	4778/3.1	*Maintenance* of an *item* that is deferred or advanced in time when an unplanned opportunity becomes available.

No.	Term	Source	Definition
4252	**other operational delay time**	3811	The period of time during which the *item* is unable to perform due to a *failure* that has not been scheduled for *action*.
4253	**parts list**	3811	A definitive list of all *items* that form the *asset*. NOTE. This document forms part of the *technical manual*.
4254	**planned maintenance**	3811	The *maintenance* organized and carried out with forethought, control and the use of *records* to a predetermined plan. NOTE. *Preventive maintenance* is always part of planned maintenance; *corrective maintenance* may or may not be.
4255	**preventive maintenance**	4778/3.2	The *maintenance* carried out at predetermined intervals or according to prescribed criteria and intended to reduce the probability of *failure* or the degradation of the functioning of an *item*.
4256	**preventive maintenance time**	4778/3.2	That part of the *maintenance time* during which *preventive maintenance* is performed on an *item*, including *technical delays* and *logistic delays* inherent in *preventive maintenance*.
4257	**reaction time**		The time that elapses between the recognition of a need for *repair* and its execution.
4258	**remote maintenance**	4778/3.2	*Maintenance* of an *item* performed without physical access of the personnel to the *item*.
4259	**running maintenance**	3811	*Maintenance* that can be carried out whilst the *item* is in *service*.
4260	**running maintenance time**	3811	The period of time during which *maintenance* is carried out whilst the *item* is in *service*.
4261	**scheduled maintenance**	4778/3.2	The *preventive maintenance* carried out in accordance with an established time schedule. NOTE. In certain instances, for time read operating hours, distance travelled, etc. as appropriate.
4262	**shutdown maintenance**	3811	*Maintenance* that can be carried out only when the *item* is out of *service*.
4263	**spares policy**		A declared basis by which the holding of a *stock* of spares is determined.
4264	**spares stock**	5191	*Items* that are held available for *maintenance* purposes or for the replacement of defective parts. NOTE. If spares stock is associated with a saleable *product*, it is regarded as direct *stock*, whereas if associated with the fixed *assets* (e.g. plant, vehicles) it is regarded as indirect *stock*.

No.	Term	Source	Definition
4265	**stock** inventory *deprecated*	5191	All the tangible material *assets* of a company other than the fixed *assets*; comprising all the finished or saleable *products*, all the *items* to be incorporated into the finished *products* and all the *items* to be consumed in the process of manufacturing the *product* or in the carrying out of the business. NOTE 1. Inventory, when used as a generic term, is synonymous with stock. This use is common in the USA and extensive in the UK. NOTE 2. An inventory, when used specifically, is defined as a list of tangible material *assets*. For production control purposes this can be limited to being a list of stock.
4266	**storage life** shelf-life *deprecated*	EOQ	The specified length of time prior to use for which *items* that are inherently subject to deterioration are deemed to remain fit for use under prescribed conditions.
4267	**strategic spares**		Spares held against circumstances that are not expected to arise routinely or frequently during the life of the *asset* but which would have serious consequences if they did occur.
4268	**undetected fault time**	4778/3.2	The time interval between *failure* and recognition of the resulting *fault*.
4269	**unplanned maintenance**	3811	The *maintenance* carried out to no predetermined plan.
4270	**unscheduled maintenance**	4778/3.2	The *maintenance* carried out not in accordance with an established time schedule, but after reception of an indication regarding the state of an *item*.

4.3 Maintainability terms

NOTE. Further maintainability terms are defined in sections **13** and **16** of BS 4778 : Section 3.2 : 1991.

4301	**accessibility**		A qualitative or quantitative measure of the ease of gaining access to a component for the purposes of *maintenance*.
4302	**maintainability**	4778/3.2	The probability that a given active *maintenance action* for an *item* under given conditions of use can be carried out within a stated time interval, when the *maintenance* is performed under stated conditions and using stated procedures and resources. NOTE. The term maintainability is also used to denote the maintainability performance quantified by this probability.

No.	Term	Source	Definition
4303	**maintainability model**	4778/3.2	A mathematical *model* used for prediction or estimation of *maintainability* performance measures of an *item*. NOTE. An example is the *maintenance tree*.
4304	**maintainability requirements**	4778/1	A statement of the principal means and frequency of preventing an *item* from failing or of restoring its function when it has failed. NOTE. Compare with **4239**.
4305	**maintenance tree**	4778/3.2	A logic diagram showing the pertinent alternative sequences of *elementary maintenance activities* to be performed on an *item* and the conditions for their choice.
4306	**modularity**		A measure of the extent of an *asset*'s ability to be disassembled into *modules* which are of common or interchangeable designs.
4307	**module**		A subassembly within an *item* of equipment or an *item* of equipment within a larger system, which may be removed, replaced or interchanged in one piece, usually without the need to adjust or dismantle other adjacent *items*.

4.4 Maintenance schedule and optimization terms

NOTE. The following terms are also applicable.
2117 model
2119 optimization
4261 scheduled maintenance

4401	**bar chart**	3138	A chart on which activities and their durations are represented by lines drawn to a common time scale showing a sequence of *operations*. NOTE 1. This definition is similar to 10021 in BS 4335 : 1987. NOTE 2. The term bar diagram is used to signify a means of depicting statistical information. See BS 5532 : Part 1 for the relevant definition.
4402	**flow chart; procedure chart**	3138	A graphical representation of a procedure, usually using symbols connected by flow lines.
4403	**Gantt chart**	3138	A *bar chart* used as a means of control on which work planned and work done are represented, showing their relation to each other and to time.
4404	**maintenance schedule**	3811	A comprehensive list of *items* and the *maintenance* required, including the interval at which *maintenance* should be performed. NOTE. This document forms part of the *technical manual*.

No.	Term	Source	Definition
4405	**queuing theory**	3138	The use of mathematical *models* and theorems in the analysis of systems in which *service* is provided under conditions of varying supply and demand.
4406	**reliability centred maintenance** **RCM** *abbreviation*		A systematic approach for identifying effective and efficient *preventive maintenance tasks* for equipment and *items* in accordance with a specific set of procedures and for establishing intervals between *maintenance tasks*.

Section 5. Terms relating to end-of-life

No.	Term	Source	Definition
5.1 Terms and definitions			
NOTE. The following term is also applicable. 2612 redundancy			
5101	**disposal**		The act of getting rid of an unwanted *item* by means of sale or otherwise.
5102	**disposal instructions**	3811	The document that describes in detail the method and precautions to be observed in discarding or otherwise disposing of an *asset* when it has failed or is no longer required for any reason. NOTE. This document forms part of the *technical manual*.
5103	**obsolescent**		Becoming, or about to become, obsolete, out of date or unobtainable.
5104	**obsolete item**		An *item* that is no longer being manufactured or supplied. NOTE. The reason may be that it is no longer required or that it has been superseded through technological advances.
5105	**replacement theory; renewal theory**		A study comparing various options for replacing, renewing or retaining an *asset* or component reaching the end of its life.
5106	**scrap**		*Items* or material discarded as being incapable of being rectified or salvaged within a particular manufacturing process.

Section 6. General terms

No.	Term	Source	Definition

6.1 Terms relating to information technology applications

NOTE. The following terms are also applicable.
2119 optimization
3208 history record
4265 stock

6101	**card reader**		A device that reads or senses *data* from a card and transforms these *data* into electrical signals.
6102	**classification**	EOQ	The act of grouping *items* into classes.
6103	**codification**	3811	The act of systematically sequencing, identifying and presenting *items* within their class or classes.
6104	**computer**	2382/1	A programmable functional unit that consists of one or more associated *processing units* and peripheral equipment, that is controlled by internally stored programs and that can perform substantial computation, including numerous arithmetical operations or logic operations, without human intervention during a run.
6105	**computer aided design** **CAD** *abbreviation*		The application of *computers* in the *interactive* mode for design, draughting and storing designs.
6106	**computer aided manufacture** **CAM** *abbreviation*		Manufacture in which *computers* are used to instruct and control production plant and equipment.
6107	**computer integrated manufacture** **CIM** *abbreviation*		Manufacture in which various computerized systems in a manufacturing plant are linked to provide an integrated manufacturing system. NOTE. Degrees of integration are possible, from simple links within a factory to a totally integrated system that networks the manufacturing function to the entire business enterprise.
6108	**data**	2382/1	A representation of facts, *concepts* or instructions in a formalized manner suitable for communication, interpretation or processing by human beings or by automatic means.
6109	**disk pack**	2382-12	An assembly of *magnetic disks* that can be removed as a whole from a disk unit, together with the associated container from which it cannot be separated.
6110	**floppy (disk);** **flexible disk**	2382-12	A flexible *magnetic disk* enclosed in a protective container.

No.	Term	Source	Definition
6111	**hardware**	2382/1	Physical equipment as opposed to programs, procedures, rules and associated documentation.
6112	**information technology** **IT** *abbreviation*		The technology of recording, storing, transmitting, processing and displaying *data*.
6113	**interactive**	3811	Having the ability to question and analyse information according to current needs. Communicating with the *computer* on the basis of *action* and response.
6114	**keyboard**		A manually operated device that is used to input instructions and *data* to a *computer*. NOTE. The majority of keyboards have a layout of alphanumeric and punctuation keys similar to that of a standard typewriter. Keyboards may also be designed for specialist applications, where for example the keys are grouped for ergonomic *efficiency*, or in alphabetical order or only use the numeric character set.
6115	**language**		A specific set of characters, words, punctuation, syntactic rules and conventions used for conveying information. NOTE. In the context of *data* processing, artificial languages are used for generating or expressing programs and for passing instructions to *computer* systems.
6116	**magnetic disk**	2382-12	A flat circular plate with a magnetizable surface layer on which *data* can be stored.
6117	**magnetic tape**	2382-12	A tape with a magnetizable surface layer on which *data* can be stored.
6118	**numerical control** **NC** *abbreviation*		The control of machine tools by means of codified *data* input by electronic or similar automatic means.
6119	**operating system**	2382/1	*Software* that controls the execution of programs and that may provide *services* such as resource allocation, scheduling, input/output control and *data* management. NOTE. Although operating systems are predominantly *software*, partial or complete *hardware* implementations are possible.
6120	**physical asset register**	3811	A *record* of *items*, including information such as constructional and technical details about each. NOTE. The physical asset register may be combined with an inventory (see note 2 to **4265** *item*).
6121	**printer**	2382-12	An output unit that produces a hard copy *record* of *data* mainly in the form of a sequence of discrete graphic characters belonging to one or more predetermined character sets.

No.	Term	Source	Definition
6122	**processing unit** central processing unit *deprecated*	2382/1	A functional unit that consists of one or more processors and their internal storages.
6123	**random access memory** **RAM** *abbreviation*	2381-12	A storage device in which *data* can be written and read NOTE. RAM is deprecated in the sense of direct access storage device.
6124	**read only memory** **ROM** *abbreviation*	2382-12	A storage device in which *data*, under normal conditions, can only be read.
6125	**record**		1) A set of related *data* or words treated as a unit. NOTE. As an example, in *stock* control each invoice could constitute one record.
		3811	2) To preserve information in a file.
6126	**requirement specification**	3811	A detailed brief of the *user's* requirements.
6127	**software**	2382/1	Intellectual creation comprising the programs, procedures, rules and any associated documentation pertaining to the *operation* of a *data* processing system. NOTE. Software is independent of the carrier used for transport.
6128	**software specification**	3811	The conversion of the *user's requirement specification* into file structures, report lay-outs, input, amend and delete routines.
6129	**visual display unit** **VDU** *abbreviation*	3811	A device, visually similar to a television set, that is used to display *data* from a *computer*.

6.2 Terms relating to education, training and qualifications

6201	**apprenticeship**	A formal contractual arrangement between an employee and employer for the training of the former in a specified skill or range of skills.
6202	**authorized person**	A *competent person* who is given authority to perform a given *task* or *tasks*.
6203	**competence**	The ability to perform a specific activity or range of activities satisfactorily and safely by virtue of training and experience.
6204	**competent person**	A person who, by virtue of training and experience, can perform specified *tasks* satisfactorily and safely.

No.	Term	Source	Definition
6205	**continued education and training** **CET** *abbreviation*		Education and training undertaken to extend a person's abilities after initially entering employment.
6206	**continued professional development** **CPD** *abbreviation*		Education and training undertaken by a professionally qualified person after registration as a member of a professional body. NOTE. Proof of an individual's CPD may be a requirement for maintaining professional status throughout working life.
6207	**National Council for Vocational Qualifications** **NCVQ** *abbreviation*		A body set up by Parliament to establish the standards of industrial education, training and experience that have to be met to qualify a person in a particular discipline or *job* category at a specified level of authority.
6208	**trainee**		A person undertaking a course of organized training that is designed to bring performance up to a specified level of *competence* or extend the range of abilities.
6209	**vocational qualifications**		The level of *competence*, usually determined by examination or *assessment*, required to confirm a person's ability to perform a specified *job* function within a trade or profession satisfactorily.

6.3 Miscellaneous terms

NOTE. The following terms are also applicable.
1205 entity; item
2102 assessment

6301	**audit**		A systematic *examination* of, for example, documents, reports, accounts, *stock* holdings or quality attributes. NOTE. Audits are usually performed to confirm a stated performance, quantify a particular situation or conform to a statutory requirement under company law.
6302	**evaluation**		Ascertainment, as closely as possible, of the numerical value of a given parameter or quantity.
6303	**learning curve**		A graphical representation of the improvement in performance of an *asset* or personnel over a period of time, that can be ascribed to the steadily increasing experience, skill levels and *competence* of individuals.
6304	**repaired item**	4778/3.2	A repairable *item* which is in fact repaired after a *failure*.

No.	Term	Source	Definition
6305	**value analysis**	3138	A systematic interdisciplinary *examination* of factors affecting the *cost* of a *product* or *service*, in order to devise means of achieving the specified purpose most economically at the required standard of quality and *reliability*.

6.4 Qualifying terms

6401	**active time**		That part of *maintenance time* during which *maintenance* is actually performed on an *item*.
6402	**estimated**	4778/3.2	Qualifies a value obtained as the result of the *operation* made for the purpose of assigning, from the observed values in a sample, numerical values to the parameters of the distribution chosen as the statistical *model* of the population from which this sample is taken. NOTE. The result may be expressed either as a single numerical value, a point *estimate*, or as a confidence interval.
6403	**instantaneous**	4778/3.2	Qualifies the value, at a given instant of time, of a time-dependent variable quantity.
6404	**intrinsic;** **inherent**	4778/3.2	Qualifies a value determined when *maintenance* and operational conditions are assumed to be ideal.
6405	**mean** average *deprecated*	4778/3.2	1) The value obtained as the expectation of a random variable. 2) An integral whose magnitude depends on a time during a given interval divided by the time interval itself.
6406	**observed data**	4778/3.2	Values related to an *item* or a process obtained by direct observation. NOTE 1. Values referred to could be events, time instants, time intervals, etc. NOTE 2. When observed data are recorded, all relevant conditions and criteria should be stated.
6407	**optimized**		Balanced between maximum benefit and minimum *costs* by selection of the best combination of characteristics.
6408	**predicted**	4778/3.2	Qualifies a value, assigned to a quantity, before the quantity is actually observable, computed on the basis of earlier observed or *estimated values* of the same quantity or of other quantities using a mathematical model.

Annex

Annex A (informative)
Publications containing related terms

BS 3138	*Glossary of terms used in management services*
BS 4335	*Glossary of terms used in project network techniques*
BS 4778	*Quality Vocabulary*
	Part 1 *International terms*
	NOTE 1. This is identical with ISO 8402, published by the International Organization for Standardization, through its Technical Committee ISO/TC 176.
	Part 2 *Quality concepts and related definitions*
	Part 3 *Availability, reliability and maintainability terms*
	Section 3.1 *Guide to concepts and related definitions*
	Section 3.2 *Glossary of international terms*
	NOTE 2. This is the English language version of Chapter 191 of the International Electrotechnical Vocabulary (IEV), published by the International Electrotechnical Commission as IEC 50(191) : 1990. Chapter 191 was published through IEC's Technical Committee IEC/TC 56.
BS 5191	*Glossary of production planning and control terms*
BS 5233	*Glossary of terms used in metrology (incorporating BS 2643)*
BS 5532	*Statistical terminology*
	Part 1 *Glossary of terms relating to probability and general terms relating to statistics*
BS EN 45020	*Glossary of terms for standardization and related activities*
EOQ	*Glossary of terms used in the management of quality*, 6th edition, 1989. Published by the European Organization for Quality (EOQ) [1]

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List of references

Informative references

BSI standards publications

BRITISH STANDARDS INSTITUTION, London

BS 3138 : 1992	*Glossary of terms used in management services*
BS 3843 :	*Guide to terotechnology (the economic management of assets)*
BS 3843 : Part 1 : 1992	*Introduction to terotechnology*
BS 3843 : Part 2 : 1992	*Introduction to the techniques and applications*
BS 3843 : Part 3 : 1992	*Guide to the available techniques*
BS 4335 : 1987	*Glossary of terms used in project network techniques*
BS 4778 :	*Quality vocabulary*
BS 4778 : Part 1 : 1987	*International terms*
BS 4778 : Part 2 : 1991	*Quality concepts and related definitions*
BS 4778 : Part 3 :	*Availability, reliability and maintainability terms*
BS 4778 : Section 3.1 : 1991	*Guide to concepts and related definitions*
BS 4778 : Section 3.2 : 1991	*Glossary of international terms*
BS 4884 :	*Technical manuals*
BS 4884 : Part 1 : 1992	*Specification for presentation of essential information*
BS 4884 : Part 2 : 1993	*Guide to content*
BS 4884 : Part 3 : 1993	*Guide to presentation*
BS 5191 : 1975	*Glossary of production planning and control terms*
BS 5233 : 1986	*Glossary of terms used in metrology (incorporating BS 2643)*
BS 5532 :	*Statistical terminology*
BS 5532 : Part 1 : 1978	*Glossary of terms relating to probability and general terms relating to statistics*
BS EN 45020 : 1991	*Glossary of terms for standardization and related activities*
BS ISO/IEC 2382 :	*Information technology. Vocabulary*
BS ISO/IEC 2382 : Part 1 : 1984	*Fundamental terms*
BS ISO/IEC 2382 : Part 12 : 1988	*Peripheral equipment*

Other reference

[1] *Glossary of terms used in the management of quality,* 6th edition. European Organization for Quality, 1989

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