BRITISH STANDARD

BS 3811:1993

Glossary of

# Terms used in terotechnology

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# 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 It is a revision of BS 3811:1984 which is withdrawn.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 3843-1, BS 3843-2 and BS 3843-3.

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 4778-3.2:1991, 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.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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

**Summary of pages**
This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 48, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.


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## 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 4778-3.2:1991. Similarly for quality terms, the authoritative source was ISO 8402:1986, which is identical with BS 4778-1:1987. 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 4778-1:1986 (identical with ISO 8402:1986) |
| 4778/2 | BS 4778-2:1991 |
| 4778/3.1 | BS 4778-3.1:1991 |
| 4778/3.2 | BS 4778-3.2:1991 (identical with IEV, Chapter 191) |
| 5191 | BS 5191:1975 |
| 5233 | BS 5233:1986 |
| 5532 | BS 5532-1:1978 |
| 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.

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# 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*.<br>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*.<br>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*.<br>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.<br>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;**<br>**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*. |


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| No. | Term | Source | Definition |
|---|---|---|---|
| **1208** | **output** | | A quantitative and qualitative measure of the *product* produced. |
| **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.<br>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.<br>NOTE 1 Examples of the diverse range of services include law enforcement, insurance, electricity supply, hairdressing, tax collection, welfare benefits and medical treatment.<br>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.<br>NOTE 2 The *supplier* or the *customer* may be represented at the interface by personnel or equipment.<br>NOTE 3 *Customer* activities at the interface with the *supplier* may be essential to the service delivery.<br>NOTE 4 Delivery or use of tangible *products* may form part of the service delivery.<br>NOTE 5 A service may be linked with the manufacture and supply of a tangible *product*.<br>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.<br>NOTE 6 In this context the term is usually used in the plural as a collective term for these individual supplies.<br>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*.<br>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*".<br>NOTE 2 In a contractual situation the supplier may be called the contractor.<br>NOTE 3 The supplier may be, for example, the producer, distributor, importer, assembler, or *service* organization.<br>NOTE 4 The supplier can be either external or internal. |
| **1213** | **user** | | The individual who, or organization that, operates or uses the *product*.<br>NOTE *Terotechnology* clearly distinguishes this specialized meaning from its more general meaning. |

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# 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.<br>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.<br>NOTE 1[a] Capital cost is usually restricted to those *costs* that are capitalized in the accounts.<br>NOTE 2[a] 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.<br>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**<br>**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**<br>**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.<br>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)*. |

[a] This note does not form part of the BS 4778-3.1 definition.


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| 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.<br>2) A representative value of a parameter for a particular purpose.<br>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*.<br>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.<br>2) A representation in some way of the physical or economic set of circumstances. |
| **2118** | **net present value**<br>**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.<br>NOTE Choice and *evaluation* of competing solutions should take account of net present value and changing price levels where this can be done. |

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| No. | Term | Source | Definition |
|---|---|---|---|
| **2119** | **optimization** | 3811 | Finding the best procedure, policy or *maintenance* interval with respect to specified criteria. |
| **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. |


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| No. | Term | Source | Definition |
|---|---|---|---|
| **2206** | **cost of scrap** | 3138 | The net *costs* associated with the production and *disposal* of rejected *output*.<br>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.<br>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.<br>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*.<br>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.<br>NOTE Attention is drawn to the fact that statutory requirements may exist governing minimum acceptable conditions. |

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| 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.<br>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).<br>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.<br>NOTE 1 The term certification should not be used in the context of second or first parties, see **2314**.<br>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.<br>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.<br>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**. |


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| No. | Term | Source | Definition |
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| **2308** | **defect** | 4778/1 | The non-fulfilment of an intended requirement or an expectation for an *entity*, including one concerned with *safety*.<br>NOTE 1 The requirement or expectation should be reasonable under the existing circumstances.<br>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 4778-3.1:1991 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.<br>NOTE 3 The definition covers the departure or absence of one or more quality characteristics from intended usage requirements.<br>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*.<br>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.<br>NOTE 2 An alternative term for imperfection is quality characteristic departure.<br>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.<br>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.<br>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. |
| **2310** | **nonconformity** | 4778/1 | The non-fulfilment of a specified requirement.<br>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.<br>NOTE 2 The basic difference between nonconformity and *defect* is that specified requirements may differ from the requirements for the intended use.<br>NOTE 3 See also **2308**. |

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| No. | Term | Source | Definition |
|---|---|---|---|
| **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.<br>NOTE 1 Unless given requirements fully reflect the needs of the *user*, quality assurance is not complete.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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. |

## 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. |


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| No. | Term | Source | Definition |
|---|---|---|---|
| **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.<br>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.<br>NOTE 1 The group includes techniques concerned with time, resources, *costs* and other influencing factors, e.g. uncertainty.<br>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.<br>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*. |

## 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. |

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| No. | Term | Source | Definition |
|---|---|---|---|
| **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.<br>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*. |

## 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. |


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| No. | Term | Source | Definition |
|---|---|---|---|
| **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:<br>a) evaluate the design, its requirements and its implementation;<br>b) identify problems, if any and to propose solutions.<br>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**<br>**FMEA** *abbreviation*<br>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**<br>**FMECA** *abbreviation*<br>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*. |
| **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*. |

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