CIB MASTER LIST

of Headings for the Arrangement and Presentation of Information in Technical Documents for Design and Construction

1993

CIB REPORT

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CIB MASTER LIST

Headings for the arrangement and presentation of information in technical documents for design and construction: 1993

Introduction

The CIB Master List is an internationally agreed list of headings for the arrangement and presentation of information used in design, construction, operation, maintenance and repair of buildings and building services, and in associated documents on the supply of construction products and services, their manufacturers and suppliers.

The Master List came about as the result of a proposal made by Ingvar Karlén, then director Svenska Byggtjänst, in 1958. Three editions have been published: the first, in 1964, had the title: A Master List of the properties of building materials and products; the second, in 1972, the title: CIB Master Lists for structuring documents relating to buildings, building elements, components, materials and services (CIB Report 18); and the third, in 1983, the same title as this, the 1993 edition.

CIB Master List 1993 has been prepared by George Atkinson, under the auspices of CIB Working Commission W57: Building documentation and information transfer, in consultation with Charles Rogers and users in many countries, and with generous financial help from Junji Hiyamuta, Interbex Inc., Japan. This edition of CIB Publication 18 has been typeset by JPA Technical Literature, Newcastle upon Tyne, with the generous help of John Potter Architect.

Uses of the Master List

The Master List order is used in the preparation of many types of document. It is linked with the process of design, construction, operation, maintenance, repair, and supply. It enables technical documents to be arranged in a consistent form. What headings are used. how much information is placed under a heading, and how far explanatory sub-headings are inserted, are matters for authors, taking into account the subject, users' needs, and the purpose of the document. To facilitate cross-reference and search for information, and to help readers check whether needed information is given, the Master List arrangement of headings should always be followed.

The twelve master headings are listed in Table 1, with notes on the kind of information appropriate to each master heading. Table 2 Checklist for headings, takes the form of a comprehensive list from which authors should select those appropriate to a document's coverage and intended use.

The two tables are followed by explanatory notes, and a summary account of developments and changes in the Master List since CIB Working Commission W31: 'Property lists for building products' met in Rotterdam in November 1960 under Ingvar Karlén, chairman-coordinator, to prepare the first edition of the Master List (CIB Report 3).

Table 1: CIB MASTER LIST

Headings for arrangement and presentation of information in technical documents for design and construction: 1993.

	Heading	Information given under heading
0	DOCUMENT	Title of document; originator; publication details
1	IDENTIFICATION BRIEF DESCRIPTION	Range of products or services covered; proprietary/trade name; manufacturer/supplier; identification information eg material, intended use, finish, method of manufacture
2	REQUIREMENTS	Requirements that the product or service will meet like technical specifications, regulations and standards
3	TECHNICAL DESCRIPTION	Intrinsic properties eg composition, size, mass, colour
4	PERFORMANCE	Behaviour of product or service in use: structural; fire; resistance to water, chemicals, mould etc; thermal, optical, acoustic, electrical; resistance to attack; service life, durability, reliability
5	DESIGN WORK	Technical and economic suitability; design methods and calculations; limitations and precautions; model specification clauses; examples of design details
6	SITE WORK	Handling, storage, installation, fixing, cleaning, protection and other information of direct interest to builders
7	OPERATION	Information for building users, including operation of components like blinds, windows and security devices; commissioning and operation of services and equipment
8	MAINTENANCE, REPAIR, REPLACEMENT, DISPOSAL	Information required, after installation or completion of work, on cleaning, maintenance, servicing, repair, replacement and disposal of used products
9	SUPPLY	Packaging, transport and delivery; prices, conditions of sale and other commercial and contractual information
10	MANUFACTURER/SUPPLIER	Information about manufacturer/supplier/importer's administrative and technical organisation
11	REFERENCES	Related publications eg test reports and installation instructions; reference to other publications with addresses of manufacturers/suppliers of associated products and services; locations where examples of installed work can be inspected

Table 2: CHECKLIST FOR HEADINGS

This is a comprehensive list of headings for construction information. Not every heading is suitable, or will be needed in every technical document. Authors should select headings from the list appropriate to a document's intended use.

0 DOCUMENT

Title and format; originator; publication details

1 IDENTIFICATION, BRIEF DESCRIPTION

1.1 Manufacturer of product; supplier of service

Sufficient information to identify manufacturer and/or supplier; in non-commercial documents author/publisher (full information will be given under Heading 10)

1.2 Date of publication

Series/volume number may also be given.

1.3 Generic name

Name in common use identifying group or family to which product or service belong; may reflect material, method of manufacture, function and use, or a combination of these attributes.

1.4 Commercial name

Manufacturer's or supplier's brand or trade name; logotype.

1.5 Brief description

Summary of key information about product or service to which author may wish to draw special attention: composition, size, appearance, outstanding characteristics, intended uses, merits, limitations to use, precautions.

1.6 Authority for technical claims

Quality and safety marks: conformity to related standards - industrial, national, European, international. Agrément certificate; European technical approval; CE conformity mark/certificate: issuing authority; reference number; date, period of validity; reservations

2 REQUIREMENTS

A manufacturer or supplier may wish to refer to a regulation or other requirement, eg technical specification of a public authority or other major client, which the product or service is intended to satisfy relating to: structural strength and stability; serviceability; fire protection; fire safety; safety and security in use; habitability: indoor climate - thermal, acoustic; space provision; protection of the environment; facility in site work, operation, maintenance; economy in use; conservation of energy; water conservation; service life.

The six essential requirements listed in Annex 1 of the Construction Products Directive: 89/106/EEC, namely:

1. Mechanical resistance and stability
2. Safety in case of fire
3. Hygiene, health and the environment
4. Safety in use
5. Protection against noise
6. Energy economy and heat retention

and associated interpretative documents may serve as a reference source.

3 TECHNICAL DESCRIPTION

3.1 Composition

Materials used; method of manufacture; constituent parts.

3.2 Methods of assembly and connection

Provision for adjustment, movement.

3.3 Accessories

Where there is a range of accessories, reference to associated documents may be needed: safety and security devices; operating mechanisms; special aids for the handicapped.

3.4 Shape, size

In what form, and how much information on shape and size is given depends on nature of product or installation, and use of document; information may be in the form of tables, possibly giving a range of shapes, sizes, colours etc, supplemented by line drawings and/or photographs.

3.5 Weight, density

In what form, and how much information on weight (mass) is given will depend both on the needs of target readers and a product's use; information on weight as delivered may be required for site work; weight of an item intended to contain water or another liquid may usefully include information when container is full. A designer may need information on density, and moisture content at which density measured.

3.6 Surface and sensory characteristics

Characteristics may be described in terms of a physical measure, or some acknowledged scale; in qualitative terms, or illustrated by samples. To be considered: colour, pattern, texture, lustre, shine, opacity, smoothness, evenness, toughness, feel, smell.

4 PERFORMANCE

In selecting a product or service for an intended use, information about performance, or behaviour in use, is specially important. Headings group information on reaction to effects, for example, of loadings, high temperatures, chemical, biological attack, etc - singly or in combination.

Performance may be measured using tests which represent 'standard' conditions of use; may be assessed by calculation or observations of behaviour in use; or may be compared with one or more requirements listed under Heading 2; technical approval bodies may give independent assessments of performance under stated conditions.

Usually, authors will make a limited, appropriate selection from the list of performance attributes given here. Where performance is superior to that required in a regulation, harmonised European standard or similar document, an author may wish to refer to this feature, giving authority for the claim.

4.1 Active: capacity, output, consumption

Under this heading information will be given where a product or service has an output, does work, contains water or another liquid, or consumes a resource like energy; it will mostly be used for information needed for building and environmental services.

4.2 Structural, mechanical

Information under this heading is relevant to essential requirement 1: Mechanical resistance and stability. Attributes to be considered include: resistance to effects of external forces causing collapse, deformation, bursting, tearing, peeling, cracking, shattering, indentation, scratching, mechanical wear, fatigue, creep, soft or hard body impact; may be described in terms of compressive, shear, tensile strength, bending strength, long term deflection; modulus of elasticity - dynamic, static; stiffness; coefficient of friction, slipperiness, skid resistance; resistance to shock.

4.3 Fire

Information under this heading is relevant to essential requirement 2: Safety in case of fire; reference should be made to international and national fire standards. Attributes to be considered include: burning behaviour; reaction to fire; non-combustibility; ignitability, flammability; resistance to surface spread of flame; heat, smoke and gas release; penetration of flame, smoke, gas, heat; fire resistance of components and structural elements - stability, integrity, insulation (time, class); flashpoint of liquids; heat emission from building materials; contribution to fire load; resistance to exposure from heat radiation; smoke and flame stopping; containment of effects of explosions .

Mention may be made of active fire protection measures like facility for evacuation of occupants, assistance to rescue and firefighting personnel.

4.4 Gaseous, liquid, solid

Information under this heading may be relevant to essential requirements 3: Hygiene, health and the environment, and 4: Safety in use. There are a wide range of physical and chemical effects which - singly, or in combination - affect performance of products and services. Attributes and features to be considered include in general:
air tightness of joints; effectiveness of sealing air gaps; control of air leakage of ductwork, etc after installation; permeability to gases and water; frost resistance; release of volatile organic compounds, odours, and other air pollutants; effectiveness of control by coatings, etc; effectiveness of removal of water vapour, combustion products, tobacco smoke and other harmful gases and airborne substances; supply of air of satisfactory quality; liquid water absorption, imperviousness to water; resistance to penetration of driving rain and snow; resistance to rising damp; vapour permeability; control of interstitial and surface condensation; moisture absorption; hygroscopic humidity content; hygrometric expansion coefficient, effect of relative humidity change; precautions against hazard of Legionnaires' disease; for pipework, valves, taps, backflow devices, connections and other fittings, cisterns and tanks, sanitary appliances, drains and manholes: mechanical endurance, tightness, resistance to corrosion, resistance to abrasion, permeability to pollutants, effectiveness in disposal of liquid waste, non-release of foul air, ease of cleaning, effectiveness of self-cleaning.

4.5 Biological

A wide range of living organisms - singly, or in combination - affect performance of products and services, their actions being influenced by associated gaseous or liquid and/or temperature conditions. Information under this heading may be relevant to essential requirements 3: Hygiene, health and the environment, and 4: Safety in use. Attributes to be considered include, in general: susceptibility to harmful micro-organisms, growth of fungi, insect attack; effectiveness of fungicides for surface treatment, for pressure treatment, uptake of preservative; effectiveness of barriers against termites, flies, other insects, rodents and other vermin for solid waste storage and disposal equipment: size, shape to facilitate cleaning, tightness of container and cover, effectiveness of control over flies, other insects, rodents and other animals.

4.6 Thermal

Information under this heading is relevant to essential requirement 6: Energy economy and heat retention. Gaseous or liquid conditions, and ambient temperature may affect performance. Attributes to be considered include: for fabric materials: thermal conductivity, surface conductance for radiation, convection; thermal resistance, diffusivity; specific heat capacity; emissivity for long-wave radiation, thermal stability, thermal expansion coefficient, thermal distortion, brittleness, heat ageing, calorific value; melting, boiling point, spalling, effect of thermal shock; for elements of construction: thermal transmittance (U-value), thermal capacity, thermal inertia, heat loss characteristics; for solar protection: transmissivity and absorptivity of solar radiation, shading, effectiveness in reducing solar radiation; for heating appliances and systems: mode of heat transfer, full load efficiency, part load efficiency, rated output for specific operating conditions, power consumption, thermal storage capacity, temperature control, temperature of accessible surfaces.

4.7 Optical

Information under this heading may be relevant to essential requirements 4: Safety in use; for solar radiation, also 6: Energy economy and heat retention. Attributes to be considered include: daylight transmission, spectral transmission characteristics, retroreflection, transparency; for luminaires: efficacy (light output/power), brightness, illuminance - direct, indirect; for visual signs: legibility, optical clarity, visibility.

4.8 Acoustic

Information under this heading may be relevant to essential requirement 5: Protection against noise. Attributes to be considered include: protection against airborne noise from outside, from another internal space; protection against structure-borne and impact noise; direct and flanking airborne sound reduction; protection against equipment noise, against reverberant noise; absorption coefficient, damping, dynamic stiffness; noise frequency weighting, single number noise rating; sound power level, sound pressure level; sound radiation, sound scattering; speech intelligibility rating [objective]; vibration effects, intensity, frequency.

4.9 Electric, magnetic, electro-magnetic radiation

Information under this heading may be relevant to essential requirements 3: Hygiene, health and the environment, 4: Safety in use, and 6: Energy economy and heat retention. Attributes to be considered include: effects of energy in electrical and electromagnetic forms; electric field strength, potential, resistance, capacitance; reaction to radio-active emissions, radon; ionization; electro-magnetic disturbance, compatability; static electricity; avoidance of shocks; lightning protection.

4.10 Resistance to attack

Information on resistance to arson, vandalism, forced entry; protection against threatening behaviour.

4.11 Service life, durability, reliability

Information may be given here under this heading, or, where appropriate, under another relevant heading; factors, which shorten or prolong service life, may be indicated. Attributes to be considered include: effects of biological, chemical and physical agents, of conditions of use; durability rating, vulnerability to decay; resistance to abrasion, corrosion, acid or sulphate attack; carbonation, alkali-silica reaction; ageing, loss of solvents and plasticisers; blistering; creep, loss of flexibility; chemical and mechanical effects of cleaning substances; light fastness; loss of serviceability, deterioration of fail-safe mechanism.

5 DESIGN WORK

Headings for information of direct use to designers and specifiers; references to design aids, codes of practice; and to regulations affecting design: guidance may be given in special documents.

5.1 Technical and economic implications

Factors which influence selection and use include: clarity and reliability of technical information; availability; reliability of product or service; cost-effectiveness in conservation of resources - manpower, energy, water, etc; initial, operating and maintenance costs; possible need for specialist workers, power, fuel, water, 'disposables', replacement parts; limitations or special conditions imposed by handling and storage on site, on installation, operation, disposal of waste; suitability for use by children. the elderly and/or handicapped.

5.2 Side effects, precautions in use

Reference to design precautions and/or need for care in use to ensure security and safety, and to minimise: health hazards, risks of injury to siteworkers, occupants and passers-by, risk of damage to nearby property; measures required to limit abnormal degradation through contact between incompatible materials.

5.3 Design aids

Technical publications may include, or be supplemented by design aids to show: uses of products; design details; layouts of services; calculation procedures; alignment charts, nomographs; references to computer programs; samples of workmanship specifications.

6 SITEWORK

Headings for information of direct use to builders and estimators; some information may have been given as part of information required in design work.

6.1 Planning sitework

Information required when considering economic and technical suitability of a product, or item of equipment for planning work and use on site, or estimating costs: arrangements for supervision, inspection and site testing; reception, handling and storage of delivered products and equipment; safety and welfare of workers and other site personnel, safety of occupants of nearby buildings and passers-by.

6.2 Resource requirements

Information on requirements for: labour, plant and material resources, including water, gas, electricity and compressed air; advanced provision for vehicle access, offloading, stacking and storage; special tools and equipment for installation and fixing.

6.3 Handling; storage

Some products and items of equipment require special precautions in: offloading, handling and storage on site, protection against damage by weather, precautions against theft and arson; special arrangements may be required for safe handling, security and storage of explosives, toxic and other hazardous products; prevention of blockage of drains and watercourses by waste materials, packaging etc.

6.4 Erection, installation and fixing

Guidance on: temporary works; lifting, temporary support, access for fixing of assemblies and structural frames

6.5 Supervision, quality control

Measures to maintain quality standards; arrangements for taking test samples, for non-destructive testing.

6.6 Commissioning

Measures to protect finished work; clean down work on completion and equipment after installation; cautions against use of unsuitable cleaning materials. Arrangements for commissioning mechanical, electrical and electronic equipment.

6.7 Security, safety, welfare on site

Security of specialist installers' equipment. Labour protection legislation, including: control of toxic and hazardous substances; fire precautions; site security; control of noise, dust, smoke and fumes; facilities on site for shelter, sanitation, mess rooms, first aid.

7 OPERATION AND USE

Building managers, householders or other users may need special operating instructions, the technical content and degree of detail depending on kind of user, and type of product or item of equipment

7.1 Methods of operation

Instructions may include: significance and use of control devices; starting up procedures; operational range; overload and other safety devices; avoidance of conditions likely to cause overload, excessive wear etc; special instructions on replacement of 'disposables'; location of lubrication points etc.; use by elderly and/or handicapped of special equipment/fittings; advice on action when product fails, or equipment malfunctions; routine checking procedures.

7.2 Safety, security

Product or item of equipment may call for special fire precautions; special precautions may be needed during operation to protect children, the elderly and handicapped, domestic animals.

8 MAINTENANCE, REPAIR, REPLACEMENT, DISPOSAL

General information about maintenance needs may have been given as part of information required in design work; additional information may be required by maintenance personnel, possibly in a separate maintenance manual.

8.1 Cleaning, servicing

Information on recommended cleaning practices and materials; cleaning practices to be avoided; need to protect nearby work from damage, staining, wet etc during cleaning; service intervals; need and arrangements for specialist servicing; protective equipment during servicing; arrangements for preparation, storage etc at end of seasonal use. Equipment handling gases, dusts, liquids may require arrangements to clean or replace filters.

8.2 Resource requirements

Information on requirements for, and source of: cleaning and protective materials; lubricants for mechanical equipment; 'disposables' - filters, etc; materials for renewal of paint work and other surface coatings; special tools and equipment; instruments for monitoring performance, checking defects and malfunctioning; maintenance schedules, records. For mechanical and electrical equipment, there may be special requirements for energy in one or more forms. Treatment equipment, like water softeners, may require special chemicals.

8.3 Labour requirements

Information on maintenance labour requirements; need for specialist skills; availability of specialist maintenance services.

8.4 Access

Information on temporary/permanent provision for access by maintenance workers; need to allow space for installation of 'disposables' and replacement items; location of inspection and lubrication points, junctions and connections.

8.5 Repairs and replacement

Information on: replacement of parts; renewal of equipment; making good damage; expected life of 'disposables'; need to maintain stock of 'spares'; mistakes to avoid when making good damage.

8.6 Precautions during maintenance and repairs

Protective measures of equipment and nearby work from damage, staining, oil and mortar droppings, damp etc; need for sheets, covers and other protective equipment.

8.7 Safety, security

Where operations take place in occupied buildings, measures to protect occupants and passers-by, children.

8.8 Disposal

Certain 'disposables', waste, used and damaged parts, etc may be or contain toxic or radio-active substances, or otherwise be a hazard to persons, animals and/or the environment, and require special disposal arrangements.

9 SUPPLY

Commercial and contractual information relating to supply and purchase of product or service may be given in separate commercial documents, and only referred to, or summarised in technical documents.

9.1 Ordering

Information on availability and ordering procedures; order forms; arrangements for hire of special tools and equipment for installation; supply of 'disposables' like filters and special chemicals; supply of spares and replacement parts.

9.2 Conditions of sale

Information on prices including discounts; method of payment, including credit terms; handling and delivery charges; prices of spares and 'disposables'; taxes and customs dues; responsibilities for insurance, fees and charges; references required; terms of warranties and guarantees.

9.3 Delivery, special services

Information on packaging, labelling; use of pallets and containers, arrangements for return; possibilities for bulk delivery to site; requirements for access, handling, lifting and stacking on site.

10 MANUFACTURER, SUPPLIER

Information about the firm making and/or supplying the product or providing the service; and/or originator of document

10.1 Commercial and administrative

Information on head office; home and export sales offices; overseas, regional and branch offices; agents and administrative representatives: postal codes, telephone, fax, telex; parent organisation; membership of trade association.

10.2 Technical and advisory organisation

Information on technical and advisory services; facilities for training; for testing, research and development; membership of professional, technical and/or research organisations.

10.3 Manufacturing and warehouse organisation

Information on location of factories; manufacturing capacity; arrangements for stockholding, holding of 'disposables', spares; stockists.

10.4 Quality assurance arrangements

Information on scope: management, factory production, stockholding, personnel; certification body, reference code.

11 REFERENCES

Information on firm activities; examples of work; buildings where product has been used, or services installed; location of showrooms, displays at building centres and trade fairs. References to firm's other publications, test reports etc; trade and technical journals; publications of supplier's of associated products, tools, 'disposables' etc; suppliers of specialist services, with addresses.

Explanatory notes on application and uses of Master Headings

0 DESCRIPTION of document

1 IDENTIFICATION, BRIEF DESCRIPTION of product or service

In applying the Master List headings, it is important to distinguish between 0 Description of document and 1 Identification and description of the product or service which is the subject of the technical document. Together, the information given under these headings helps readers decide if the document, and its contents, are relevant to their needs. The document should give the name of the originator and be dated to show its status and currency. Headings serve to draw attention to the document as a whole.

Style and layout are matters for the orginator who may find guidance, where applicable, in BS4940:1993 Technical information on construction products and services; CIB Report No. 35: Recommendations for trade literature; and in any relevant national or 'house' standard.

Readers may want to know that a product or service conforms to the requirements of an international, European or national standard or standards; whether the supplier's claim is supported by third-party assessment, testing and/or quality assurance, or by the supplier's guarantee, with appropriate information on issuing authority, period of validity, and any reservations on use. Documents may carry the appropriate conformity or quality mark. Detailed information on available test and similar technical reports is best given under 11 References.

2 REQUIREMENTS

Products and services have to meet requirements of authorities, owners and users. These may be in the form of technical specifications in regulations, standards etc; or specific to a customer, stated use, or works. CIB Master List 1983 included, as an appendix, Table 2: Requirements, drawn from ISO/DP 6241:1982. More recently, 89/106/EEC, the Construction Products Directive, has listed six essential requirements relating to safety, health, durability, energy economy, and protection of the environment in buildings and civil engineering works. Guidance on how these requirements are given concrete form is being given in a series of interpretative documents. Authors of technical descriptions may wish to refer here to any requirements a product or service are intended, or required to satisfy, giving further information under 4 Performance.

3 TECHNICAL DESCRIPTION

This section is used for information about features (attributes) intrinsic to a product or service, and normally not affected by use. Where descriptive information is extensive or complex, it may, with advantage be presented by means of tables, diagrams, drawings and other kinds of illustration. There may be separate documents devoted to descriptions of accessories. Where there are examples to be inspected, information may be given under 11 References.

4 PERFORMANCE

Information under this heading, named in the 1983 edition 'Properties', relates to behaviour in use - ie reaction of a product or service to effects of agents - single or in combination. Performance may be measured using test procedures which aim to represent 'standard' conditions of use, and which may be set out in technical specifications like international, European or national standards; may be assessed by calculation, which again may be set out in technical specifications, or by technical judgement based on observation of performance in use. It may be assessed by a combination of procedures like that set out in a UEAtc Method of Assessment and Test.

Technical specifications may use the concept of classes as a way of expressing a range within the upper and lower levels of which the behaviour of a product or service falls. Where they do, a class is usually designated in one of several ways, eg a letter ie 'classes A, B, etc', a number ie 'classes I, II, etc', or a symbol ie *, **, etc; or by a combination, eg A1, B2, etc. For convenience of users of technical documents, where conventions are given in technical specifications, these should be followed. Where, in their absence, an author adopts an 'in house' convention, he should explain its basis.

Information given under this heading will be of importance in enabling users to compare the performance of a product or service with their requirements, or the requirements of an authority. Not all the headings will necessarily be required for every document and authors must take into account both the user of a document and the matter being described in deciding what headings are needed, and on what attributes in the checklists are relevant. In all documents, however, the order in which information is arranged should be followed.

The manner in which this and the following sections are presented differs somewhat from that of the 1983 CIB Master List in that extensive checklists, drawn in part from standards and interpretative documents, are included for the convenience of authors and users.

A new heading: 4.10 Resistance to attack, is introduced covering matters like resistance to arson attack, vandalism, forced entry, and protection of occupiers against violence and threats of violent behaviour. Whether this kind of information is given here or given special notice under a heading like 4.2 Structural; mechanical, or 4.3 Fire, is likely to depend on the product or service being described, and its intended use.

The attributes listed under the heading 4.11 Service life, has been extended to take into account both the concern of users with performance over a period of time and greater understanding of the factors which may shorten or prolong service life.

5 DESIGN WORK and

6 SITEWORK

Information under the headings 5 Design work, and 6 Site work, will be directed, respectively, at designers and specifiers,and those responsible for carrying out work on construction sites. Depending on the purpose of a technical document, the information may be part of a main document or given in separate documents containing for example, design aids, lists of tools required or sitework instructions. Special attention may be drawn to side effects, health and other hazards, and to precautions to be taken to ensure safety. Headings have been introduced for information on supervision and quality control, and on commissioning.

7 OPERATION AND USE

Products and equipment may be operated by skilled personnel, or by lay users, and depending on the item, and its intended use, information under 7: Operation and use, may be tailored to particular groups of users. Reference may be made to special precautions needed where an item may be used by children, the elderly, etc. It may also be made available in separate, possibly less technical documents for lay users.

8 MAINTENANCE, REPAIR, REPLACEMENT, DISPOSAL

Compared with the 1983 Master List, this section is more detailed, reflecting the importance of these matters both for building owners and maintenance personnel. Authors of technical documents may wish to draw attention to safety measures needed where maintenance and repair operations take place in occupied buildings or passers-by are at risk. Guidance on disposal of waste, used and damaged parts may be needed where these present special hazards.

9 SUPPLY and

10 MANUFACTURER, SUPPLIER

Information under these two headings may only be summarised in a general technical document; and be dealt with more comprehensively in separate documents designed to meet commercial and trade practices.

11 REFERENCES

This heading may be used for information about a supplier's activities, and/or for references to any further sources of information to which an author wishes to direct attention.

Background to the 1993 CIB Master List

Twenty five years of international development and use in technical documents in design and construction

The annals of the CIB master list, summarised below, show how much this key information tool owes to Ingvar Karlén, director of Svenska Byggtjänst in the 1950s, and to the late Henry Eldridge, UK Building Research Station. Karlén's seminal paper on the quality description of building products formed the basis of the CIB work in Report 3 and later work in Report 18. Eldridge drafted much of the 1972 edition of Report 18.

The summary highlights some of the issues met with in the preparation of the four editions of the CIB master lists:-

- how far the master lists should be directed at the needs of laboratories or of practitioners;
- how wide should be the coverage of the master lists: elements and components, installations and building equipment, as well as materials;
- should the master list be confined to headings for the description of products, or extended to headings for documents giving requirements in briefs, performance specifications and regulations;
- whether the master list headings should be designed for use in classification systems like Sfb and for electronic data interchange.

Since 1973 the master lists have been used for guidance on the arrangement and presentation of technical information in two related publications: British Standards BS 4940 and CIB Report 35: Draft Recommendations for Trade Literature. The preparation of the 1993 edition of CIB Report 18: CIB Master List for the arrangement and presentation of information in technical documents for design and construction, and that of British Standard BS 4940: 1973 Technical information on construction products and services, have progressed in parallel; and it is hoped, following that with the publication of BS 4940, a new edition of CIB Report 35 will be issued in cooperation with UICB, the International Union of Building Centres.

June 1993 George Atkinson

THE DEVELOPMENT OF CIB MASTER LISTS: 1954 -1993

1954	CIB members initiate 'property lists' of materials for exchange of data between laboratories.
1956	CEDOC (Belgium) proposes development of similar list for practitioners.
1958	Key paper by Ingvar Karlén, then director Svenska Byggtjänst: 'Egenskapsredovisning för byggvaror (quality descriptions for building products)' published in "Byggmästaren" B11 1958, carrying a detailed master list for description of properties of building products.
1959	Ingvar Karlén's proposal presented by Swedish Committee for Building Research to UN ECE Housing Committee. November: Meeting at CIB headquarters, Rotterdam, agrees to set up a Working Commission: 'Property lists for practitioner's use'.
1960	November: First meeting CIB Working Commission W31: Property lists for building products (Ingvar Karlén, chairman-coordinator) agrees that the master list should cover materials, components and products but not equipment and plant; main sequence be 'as logical as possible'; and explanatory text giving guidance for practical use be included.
1964	CIB Report 3: Master List of Properties for Building Materials and Products published, a revised edition taking into account use experience to be published in 1970.
1965	UK Building Research Board considers CIB Report 3 with suggestion that subsidiary lists be prepared for particular product groups.
1969	June: CIB Working Commission W31, meeting in Lahti, Finland, agrees that the 1970 edition of the master list should take the form of separate master lists for components, installations and building plant, and work should be progressed on Derived Lists for groups of materials, for which UK BRS submitted drafts.
1970	January: CIB Working Commission W31, meeting in Stockholm, agrees to publication of separate master lists for elements, components and materials; and that the new edition be structured on basis of structural stability and safety; weathertightness; comfort, hygiene and safety other than structural; durability; maintenance.

1971	October: CIB Working Commission W31, in approving the 1971 edition of the master list, stresses that, although headings drawn from CIB Report 3 were used in the CI/Sfb system, the CIB master list was not primarily a classification tool. Reference was made to the use of the CIB master list in the preparation of performance specifications.
1972	CIB Report 18: Master Lists for structuring documents relating to building elements, components, materials and services published.
1973	H J Eldridge: 'The 1972 CIB Master Lists: their use in the preparation of technical literature' published as BRE Current Paper CP19/73. British Standard BS4940: 1973 Recommendations for the Presentation of Technical Information about products and services in the Construction Industry published. Appendix A: Sequence of data and preferred headings follows CIB Report 18.
1977	CIB Report 35: Draft Recommendations for Trade Literature and presentation of technical information on products and services in the construction industry, published. Recommendations based on BS4940:1973 and CIB Report 18: 1972.
1978	Commentaries on CIB Report 18: 1972 from UK BRE, Svenska Byggtjänst and Ingvar Karlén considered by CIB Working Commission W52: Building information, successor to CIB Working Commission W31. Group set up under George Atkinson to take into account these and other commentaries in preparation of new edition of CIB Report 18.
1979	UK Department of the Environment Property Services Agency publishes 'Better trade literature', explaining main features of BS4940: 1973, and CIB Reports 18 and 35.
1983	CIB master list of headings for the arrangement of information in technical documents for design and construction published as 1983 edition of CIB Report 18.

1989-1990	CIB Working Commissions W57: Building documentation and information transfer, and W74: Information coordination in the building process review need for a new edition of CIB Report 18 against, on the one hand, emphasis given to development of European standards for construction products based on essential requirements set out in EC Construction Products Directive and, on the other, on work in CIB W74 on electronic data interchange.
1990	Meeting of CIB W57 at Banbury, England, accepts proposals for a start to be made on a new edition of CIB Report 18 under leadership of George Atkinson and Charles Rogers.
1991	Following a report on work on new edition to the meeting of CIB W57 at Castle Dobris, Prague, a number of users met at CSTB headquarters, Paris, to agree basis of new edition.
1992	Joint meeting of CIB Working Commissions W57 and W74 at Montreal agree, as a new edition of CIB Report 18 was to be the basis of British Standard BS 4940: 1993, resources should be sought to enable the new edition of CIB Report 18 to be published in 1993.
1993	June: Publication of the 1993 edition of CIB Report 18 approved at the Budapest meeting ofCIB W57 in parallel to the publication of BS 4940: 1993 Technical information on construction products and services.

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