1. **BCDC 1 (1760)** **DTZS / ISO 21542:2021**

**Tittle:** Building construction — Accessibility and usability of the built environment

**Scope:** This document specifies a range of requirements and recommendations for the elements of construction, building assemblies, components, fittings and products that relate to the design and constructional aspects of usability and accessibility of buildings, i.e. access to buildings, circulation within buildings, egress from buildings during normal conditions, and evacuation in the event of a fire.

This document also contains provisions with respect to outdoor features directly concerned with access to a building or a group of buildings from a relevant site boundary, or between such a group of buildings within a common site. This document does not deal with elements of the external environment, such as public open spaces, whose function is self-contained and unrelated to the use of a specific building.

This document is applicable to new buildings and new work in existing buildings.

This document introduces the concept of ‘exceptional considerations for existing buildings’ for situations where it is exceptionally difficult to meet the requirements specified and, thus, impossible to provide full accessibility. By means of ‘exceptional considerations for existing buildings’, an acceptable, though restricted, level of accessibility is specified. An exceptional consideration for existing buildings is not to be applied in other situations or invoked in an unjustified manner, or as an excuse for not achieving a higher level of accessibility, where this is economically and/or technically feasible.

The dimensions stated in this document, relevant to the use of wheelchairs, are related to the footprint of commonly used wheelchair sizes and users as specified in ISO 7176-5 and ISO/TR 13570-2, 800 mm wide and 1 300 mm long.

1. **BCDC 1 (1761) DTZS/ ISO 12491:1997**

**Tittle:** Statistical methods for quality control of building materials and components

**Scope:** This International Standard gives general principles for the application of statistical methods in the quality control of building materials and components in compliance with the safety and serviceability requirements of IS0 2394.

This International Standard is applicable to all buildings and other civil engineering work, existing or under construction, whatever the nature or combination of the materials used, for example concrete, steel, wood, bricks.

1. **BCDC 1 (1762) DTZS/ISO 13315-1:2012 (Confirmed 2020)**

**Tittle:** Environmental management for concrete and concrete structures — Part 1: General principles

**Scope:** This part of ISO 13315 provides a framework and basic rules on environmental management related to concrete and concrete structures. This includes the assessment of the environmental impacts and methods of implementing environmental improvement based on the assessment.

This part of ISO 13315 is used when assessing the environmental impacts and implementing the environmental management of concrete and concrete structures for the environmental consideration in activities related to the production of concrete constituents, the production, recycling and disposal of concrete, and the design, execution, use and demolition of concrete structures. It is applied for their entire lifecycles, respective stages of the lifecycles, or certain ranges of the lifecycles. This part of ISO 13315 is relevant to newly produced concrete and newly constructed concrete structures, and also existing concrete and concrete structures.

The environments covered by this part of ISO 13315 include global, regional and local environments. The indoor pollution of buildings and the environments for workers in concrete producing plants and on concrete structure construction sites are not specifically covered by this part of ISO 13315. This part of ISO 13315 does not directly deal with the environmental impacts resulting from the operation of equipment installed in concrete structures. However, the special properties of concrete and concrete structures affecting the operational efficiency of such equipment is considered in this part of ISO 13315.

1. **BCDC 1 (1763) DTZS/ ISO 16711:2021**

**Tittle:** Requirements for seismic assessment and retrofit of concrete structures

**Scope:** This document provides requirements for seismic assessment and retrofit of concrete structures.

It can be used to reduce the risk of seismic damage by structural collapse or turnover during a seismic event.

This document provides the framework and principles of methods of detailed seismic assessment and the judgment, seismic retrofit plan and design, seismic retrofit execution of existing reinforced concrete structures before the occurrence of a severe earthquake and of the structures struck by an earthquake.

It is an umbrella-type document with general provisions intended to provide wide latitude of choice in terms of comprehensive principle on the evaluation of the seismic damage/expected damage of existing reinforced concrete structures and repair/retrofit. Therefore, it is intended to be used in conjunction with sound engineering judgment.

This document is applicable to reinforced concrete structures and pre-stressed concrete structures that have been designed on the basis of the structural design criteria set in a specific country or region.

It is not applicable to unreinforced concrete and masonry structures.

1. **BCDC 1 (1764) DTZS/ ISO/TS 16774-1:2016**

**Tittle:** Test methods for repair materials for water- leakage cracks in underground concrete structures — Part 1: Test method for thermal stability

**Scope:** This document specifies a laboratory test method for evaluating the thermal stress resistance of water- leakage crack repair materials through permeability testing.

The repair material injected into a test specimen with an artificial crack is thermally stressed under the applied temperature conditions outlined in different national testing parameters that reflect different environmental conditions. As such, the results are only intended to provide a comparative performance evaluation of the waterproofing repair materials between different products of the same type of repair material.

This document outlines general guidelines and procedures for the test method. Specific variables that control the quantifiable parameters of the testing are filled in using relevant national standardizations and/or testing parameters.

NOTE 1 This test method classifies and categorizes materials that are tested into families of similar properties for the purpose of making relative comparisons with the data results.

NOTE 2 Each individual repair material can be further tested in an actual construction site application for a complete assessment.

1. **BCDC 1 (1765) DTZS/ ISO/TS 16774-2:2016**

**Tittle:** Test methods for repair materials for water- leakage cracks in underground concrete structures — Part 1: Test method for thermal stability

**Scope:** This document specifies a laboratory test method for evaluating the thermal stress resistance of water- leakage crack repair materials through permeability testing.

The repair material injected into a test specimen with an artificial crack is thermally stressed under the applied temperature conditions outlined in different national testing parameters that reflect different environmental conditions. As such, the results are only intended to provide a comparative performance evaluation of the waterproofing repair materials between different products of the same type of repair material.

This document outlines general guidelines and procedures for the test method. Specific variables that control the quantifiable parameters of the testing are filled in using relevant national standardizations and/or testing parameters.

NOTE 1 This test method classifies and categorizes materials that are tested into families of similar properties for the purpose of making relative comparisons with the data results.

NOTE 2 Each individual repair material can be further tested in an actual construction site application for a complete assessment.

1. **BCDC 1 (1766) DTZS/ ISO/TS 16774-3:2016**

**Tittle:** Test methods for repair materials for water-leakage cracks in underground concrete structures — Part 3: Test method for water (wash out) resistance

**Scope:** This part of ISO/TS 16774 specifies a laboratory test method on the quantitative determination of repair material’s performance and resistance against erosion and wash out due to underground water flow.

1. **BCDC 1 (2030) DTZS/ ISO 13315-2:2014**

**Tittle:** Environmental management for concrete and concrete structures Part 2: System boundary and inventory data

**Scope:** This part of ISO 13315 provides a general framework, principles, and requirements related to the determination of system boundaries and the acquisition of inventory data necessary for conducting a life cycle assessment (LCA) of concrete, precast concrete, and concrete structures.

1. **BCDC 1 (2031) DTZS/ ISO 13315-4:2017**

**Tittle:** Environmental management for concrete and concrete structures Part 4: Environmental design of concrete structures

**Scope:** This document provides the general framework, principles and requirements for carrying out an environmental design of concrete structures, based on a lifecycle assessment (LCA) method or other appropriate methods.

This document is applicable to single concrete structures, as well as concrete structure complexes.

1. **BCDC 1 (2032) DTZS/ ISO 13315-6:2019**

**Tittle:** Environmental management for concrete and concrete structures - Part 6: Use of concrete structures

**Scope:** This document provides the principles and procedures of environmental management for maintenance/remedial activities of concrete structures, and environmental management during the operation of concrete structures.

When the environmental design of a concrete structure is to be carried out based on ISO 13315-4, this document provides detailed information on the design for its use stage.

1. **BCDC 1 (2033) DTZS/ ISO 13315-8:2019**

**Tittle:** Environmental management for concrete and concrete structures Part 8: Environmental labels and declarations.

**Scope:** This document provides a general principle, procedures and requirements for environmental labels and declarations for concrete and concrete structures. It is used for the environmental labels and declarations for concrete constituents, reinforcement, concrete, concrete products and concrete structures.

NOTE This document contains more specific requirements for environmental labels and declarations for concrete and concrete structures, based on ISO 14020, ISO 14024, ISO 14025 and ISO 21930.

This document includes the following phases of concrete and concrete structures:

— production phase of concrete constituents, concrete and concrete products;

— execution phase of concrete structures;

— use phase of concrete structures; and

— end-of-life phase.

This document applies to the partial life cycle (certain phases of the life cycle) or the entire life cycle of concrete and concrete structures. It applies to new concrete and concrete structures as well as to existing concrete and concrete structures.

1. **BCDC 2 (1993) DTZS/ISO 2478:1987 (confirmed in 2018).**

**Tittle:** Refractory products — Determination of modulus of rupture at elevated temperatures

**Scope:** This International Standard specifies a method for the determination of the modulus of rupture of refractory products at elevated temperatures, under conditions of a constant rate of increase of stress. A method for determination of the same property at ambient temperature is given in ISO 5014.

1. **BCDC 2 (1989) DTZS /ISO 2245:2006 (confirmed in 2020)**

**Tittle:** Shaped insulating refractory products — Classification

**Scope:** This International Standard specifies a classification of shaped insulating refractory products, based on the determination of permanent change in dimension on heating, with a secondary classification based on bulk density to cover lightweight products (Class L). Products composed of ceramic fibres are excluded.

1. **BCDC 2 (1991) DTZS/ISO 2477:2005**

**Tittle:** Shaped insulating refractory products — Determination of permanent change in dimensions on heating

**Scope:** This International Standard describes a method for determining the permanent change in dimensions on heating of a shaped insulating refractory product.

1. **BCDC 2 (1992) DTZS/ISO 2478:1987 (Confirmed in 2018).**

**Tittle:** Dense shaped refractory products — Determination of permanent change in dimensions on heating.

**Scope:** This International Standard specifies two methods for determining the permanent Change in dimensions of a dense shaped refractory product. lt does not apply to products containing carbon.

1. **BCDC 2 (1994) DTZS/ISO 5014:1997 (Confirmed in 2018).**

**Tittle:** Dense and insulating shaped refractory products — Determination of modulus of rupture at ambient temperatures

**Scope:** This International Standard specifies a method for the determination of the modulus of rupture dense and insulating shaped refractory products at ambient temperature, under conditions of a constant rate of increase of stress.

The method relates primarily to shaped and fired refractories. If it is to be applied to chemically bonded or tar-bonded bricks, they will usually require some form of preliminary heat treatment.

This preliminary treatment, the details of which are outside the scope of this standard, is a matter of agreement between the interested parties and is described in the test report.

1. **BCDC 2 (1995) DTZS/ISO 5022:1979 (Confirmed in 2021).**

**Tittle:** Shaped refractory products — Sampling and acceptance testing

**Scope:** This International Standard gives directives for sampling shaped refractory products and for obtaining, from a Sample of the smallest possible size, the most precise assessment possible, of the quality of a consignment.

The methods described below make it possible to carry out an acceptance test based on an assessment of the extent to which the specifications have been observed, but do not make it possible to determine whether the accepted consignment is suitable for a given application or to compare different qualities of Parts for this same purpose.

This International Standard applies to products manufactured from refractory materials.

1. **BCDC 2 (1996) DTZS/ISO 5417:1986 (Confirmed in 2022).**

**Tittle:** Refractory bricks for use in rotary kilns — Dimensions.

**Scope:** This International Standard specifies a range of dimensions of basic, fireclay and high alumina refractory bricks for use in rotary kilns.

It does not apply to special closure bricks for use in completing circles.

1. **BCDC 2 (1997) DTZS/ISO 10081-1:2003 (Confirmed in 2019)**

**Tittle:** Classification of dense shaped refractory products — Part 1: Alumina-silica

**Scope:** This part of ISO 10081 specifies the classification and designation of dense shaped refractory products of the alumina-silica series, with the following exceptions:

a) products containing more than 5% of any metallic oxide other than alumina, silica, iron oxide;

b) products containing more than 1% carbon, carbides, nitrides, oxynitrides or any associated materials.

1. **BCDC 2 (1998) DTZS/ISO 10081-2:2003 (Confirmed in 2019).**

**Tittle:** Classification of dense shaped refractory products — Part 2: Basic products containing less than 7% residual carbon.

**Scope:** This part of ISO 10081 specifies the classification and designation of dense shaped basic refractory products with or without antioxidant additives. Products containing 7% or more residual carbon after coking are excluded from this classification. The classification is applicable to dense shaped products with or without metal plates and reinforcement.

NOTE 1 ISO 10081-3 covers the classification of dense shaped basic products containing from 7% to 5% residual carbon.

NOTE 2 All bricks can be encased in metal plate and all unfired bricks can be reinforced by means of an internal metal plate, and/or mixed metal fibre.

1. **BCDC 2 (1999) DTZS/ISO 10081-3:2003 (Confirmed in 2019)**

**Tittle:** Classification of dense shaped refractory products — Part 3: Basic products containing from 7% to 50% residual carbon.

**Scope:** This part of ISO 10081 specifies the classification and designation of dense shaped basic refractory products containing 7% or more but less than 50% residual carbon after coking. It is applicable to products with or without antioxidant additives, with or without metal plates and reinforcement.

NOTE 1 ISO 10081-2 covers the classification of dense shaped basic products containing less than 7% residual carbon.

NOTE 2 All bricks can be encased in metal plate and can be reinforced by means of an internal metal plate and/or mixed metal fibre.

1. **BCDC 2 (2000) DTZS/ISO 10081-4:2014 (Confirmed in 2019).**

**Tittle:** Classification of dense shaped refractory products — Part 4: Special product.

**Scope:** This part of ISO 10081 specifies the classification and designation of dense shaped refractory products of special composition including

a) oxide products,

b) oxide and non-oxide products,

c) non-oxide silicon carbide or carbon-based products, and

d) further special products which are only designated but not classified, for example, non-oxide products, such as boride, nitride or further combinations of the series listed above.

1. **BCDC 2 (2095) DTZS/ISO 12678-1:1996 (Confirmed in 2021)**

**Tittle:** Refractory products — Measurement of dimensions and external defects of refractory bricks – Part 1: Dimensions and conformity to drawing

**Scope:** This part of IS0 12678 describes apparatus and specifies simple methods for routine measurement of dimensions of refractory bricks. It also specifies methods for inspection of conformity to shape, determining concavity, convexity and out-of-squareness. It does not establish criteria for acceptance or rejection of bricks.

The application of these methods is limited to standard shapes in accordance with IS0 5019-1 to IS0 5019-6 and IS0 5417, unless otherwise agreed.

1. **BCDC 2 (2096) DTZS/ISO 12678-2:1996 (confirmed in 2022)**

**Tittle:** Refractory products — Measurement of dimensions and external defects of refractory bricks – Part 2: Corner and edge defects and other surface.

**Scope:** This part of IS0 12678 describes apparatus and specifies simple methods for routine measurement of corner and edge defects, as well as other surface imperfections

of refractory bricks. It does not apply to the measurement of internal defects. It does not establish criteria for acceptance or rejection of bricks.

The application of these methods is limited to standard shapes in accordance with IS0 5019-1 to IS0 5019-6 and IS0 5417, unless otherwise agreed.

1. **BCDC 2 (2097) CD2/ISO 22605:2020**

**Tittle:** Refractories — Determination of dynamic Young’s modulus (MOE) at elevated temperatures by impulse excitation of vibration

**Scope:** This document specifies a method for determining the dynamic Young’s modulus of rectangular cross-section bars and circular cross-section specimens of refractories by impulse excitation of vibration at elevated temperature. The dynamic Young’s modulus is determined using the resonant frequency of the specimen in its flexural mode of vibration.

This document does not address the safety issues associated with its use. It is responsibility of the users of this standard to establish appropriate safety and health practices.