**KENYA BUREAU OF STANDARDS**

**ADOPTION PROPOSAL**

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| **Document Type:** | **Adoption proposal** | |
| **Dates:** | Circulation date | Closing date |
| 6/11/2019 | 6/12/2019 |
| **TC Secretary** | **This form shall be filled, signed and returned to Kenya Bureau of Standards for the attention of <<**Jane Maina email mainaj@kebs.org**>>** | |

The Kenya Bureau of Standards intends to adopt the International Standards as detailed here below

1. **Number:** ISO 16311-1:2014

**Title:** Maintenance and repair of concrete structures -- Part 1: General principles

**Scope:** ISO 16311-1:2014 presents the framework and general principles for maintenance and repair of all kinds of existing concrete structures- un-reinforced and reinforced concrete, prestressed concrete and steel-concrete composite structures, or their structural members.

ISO 16311-1:2014 , deterioration is clearly distinguished from damage occurring in a short period and not developing over subsequent time, such as cracking and scaling due to earthquakes or impact loading, etc. Deterioration is mainly dealt with as a target for the maintenance activities.

ISO 16311-1:2014 also provides the basic concept of repair and preventions carried out to restore structural performance of existing structures.

ISO 16311-1:2014 does not cover those aspects of maintenance and repair that are related to serviceability and esthetics without direct impact on durability and service life, e.g. cleaning of drains, removal of vegetation, refreshment of paint, etc. Neither does it cover repair of defects during execution of new structures.

1. **Number:** ISO 16311-2:2014

Title: Maintenance and repair of concrete structures -- Part 2: Assessment of existing concrete structures

**Scope:** ISO 16311-2:2014 describes general requirements and procedures for the assessment of concrete structures.

The assessment can be initiated under the following circumstances, but not limited to: a) an anticipated change in use or extension of design service life; b) structural deterioration due to time-dependent actions such as corrosion of reinforcement, fatigue, etc.; c) safety and/or serviceability check (e.g. for earthquake and increased traffic actions) as required by authorities, insurance companies, owners, etc.; d) structural damage by accidental actions. (See ISO 2394.)

1. **Number:** **ISO 16311-3:2015**

**Title:** Maintenance and repair of concrete structures -- Part 3: Design of repairs and prevention

**Scope:** This part of ISO 16311 does not cover qualification of personnel, contractual matters, and health and safety requirements for the protection of workers during the investigation and testing.

16311-3:2014 defines basic considerations and decision-making for the specification of repair and prevention remedies, and management strategies for reinforced and unreinforced concrete structures using products and systems specified in other International Standards or Technical Specifications. 16311-3:2014 covers only atmospherically exposed structures, and buried or submerged structures, if they can be accessed.

16311-3:2014 specifies repair and prevention design principles, and strategies for defects and on-going deterioration including, but not limited to: a) mechanical actions, e.g. impact, overloading, movement caused by settlement, blast, vibration, and seismic actions; b) chemical and biological actions from environments, e.g. sulfate attack, alkali-aggregate reaction; c) physical actions, e.g. freeze?thaw, thermal cracking, moisture movement, salt crystallization, fire, and erosion; d) reinforcement corrosion; e) original construction defects that remained unaddressed from the time of construction.

The execution of maintenance and repairs is covered in ISO 16311‑4

1. **Number:** **ISO 16311-4:2016**

**Title:** Maintenance and repair of concrete structures -- Part 4: Execution of repairs and prevention

**Scope:** ISO 16311-4:2014 gives requirements for substrate condition before and during application, including structural stability, storage of materials, the preparation, and application of products and systems for the protection and repair of concrete structures, including quality control and qualifications of personnel, maintenance, health and safety, and the environment.

We are therefore seeking views from potential users in respect of the same. The Standard is available at the Kenya Bureau of Standards Information Centre. Please tick and fill your preference of the listed option. (If the spaces provided are not enough, please attach a separate sheet of paper).

Adoption acceptable as presented

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Adoption proposal not acceptable because of the reason(s) below

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Our Recommendations are as follows

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Name and Signature (of respondent): ................................................

Position (of respondent): .....................................

On behalf of ......................................................................................... (Name of organization)

Date .........................................................................

**NOTE:** Absence of any reply or comments shall be deemed to be an acceptance of the proposal for adoption and **shall constitute an approval vote**.