**KENYA BUREAU OF STANDARDS**

**ADOPTION PROPOSAL**

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| **Document Type:** | **Adoption proposal** | |
| **Dates:** | Circulation date | Closing date |
| 14th August 2018 | 13th September 2018 |
| **TC Secretary** | **This form shall be filled, signed and returned to Kenya Bureau of Standards for the attention of Tania Monica** | |

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

1. **KS ISO 17640:2017**

Title: Non-destructive testing of welds -- Ultrasonic testing -- Techniques, testing levels, and assessment

Scope: ISO 17640:2017 specifies techniques for the manual ultrasonic testing of fusion-welded joints in metallic materials of thickness ≥8 mm which exhibit low ultrasonic attenuation (especially that due to scatter) at object temperatures from 0 °C to 60 °C. It is primarily intended for use on full penetration welded joints where both the welded and parent material are ferritic.

ISO 17640:2017 specifies four testing levels, each corresponding to a different probability of detection of imperfections. Guidance on the selection of testing levels A, B, and C is given in Annex A.

ISO 17640:2017 specifies that the requirements of testing level D, which is intended for special applications, be in accordance with general requirements. Testing level D can only be used when defined by specification. This includes tests of metals other than ferritic steel, tests on partial penetration welds, tests with automated equipment, and tests at object temperatures outside the range 0 °C to 60 °C.

ISO 17640:2017 can be used for the assessment of discontinuities, for acceptance purposes, by either of the following techniques:

a) evaluation based primarily on length and echo amplitude of the discontinuity;

b) evaluation based on characterization and sizing of the discontinuity by probe movement techniques.

2. **KS ISO 17638:2016**

Title: Non-destructive testing of welds -- Magnetic particle testing

Scope: ISO 17638:2016 specifies techniques for detection of surface imperfections in welds in ferromagnetic materials, including the heat affected zones, by means of magnetic particle testing. The techniques are suitable for most welding processes and joint configurations. Variations in the basic techniques that will provide a higher or lower test sensitivity are described in Annex A.

ISO 17638:2016 does not specify acceptance levels of the indications. Further information on acceptance levels for indications may be found in ISO 23278 or in product or application standards.

3. **KS ISO 3452-1:2013**

Title: Non-destructive testing -- Penetrant testing -- Part 1: General principles

Scope: ISO 3452-1:2013 specifies a method of penetrant testing used to detect discontinuities, e.g. cracks, laps, folds, porosity and lack of fusion, which are open to the surface of the material to be tested. It is mainly applied to metallic materials, but can also be performed on other materials, provided that they are inert to the test media and not excessively porous (castings, forgings, welds, ceramics, etc.)

It also includes requirements for process and control testing, but is not intended to be used for acceptance criteria and gives neither information relating to the suitability of individual test systems for specific applications nor requirements for test equipment.

4. **KS ISO 3452-2:2013**

Title: Non-destructive testing -- Penetrant testing -- Part 2: Testing of penetrant materials

Scope: ISO 3452-2:2013 specifies the technical requirements and test procedures for penetrant materials for their type testing and batch testing. ISO 3452-2:2013 covers the temperature range 10 °C to 50 °C. Additional tests in ISO 3452-5:2008 or ISO 3452-6:2008 may be required outside this range.

On-site control tests and methods are detailed in ISO 3452‑1:2013.

5. **KS ISO 3452-3:2013**

Title: Non-destructive testing -- Penetrant testing -- Part 3: Reference test blocks

Scope: ISO 3452-3:2013 describes two types of reference blocks: Type 1 reference blocks are used to determine the sensitivity levels of both fluorescent and colour contrast penetrant product families; Type 2 reference blocks are used for routine assessment of the performance of both fluorescent and colour contrast penetrant testing.

The reference blocks are to be used in accordance with ISO 3452-1:2013.

6. **KS ISO 3452-4:1998**

Title: Non-destructive testing - Penetrant testing -Part 4: Equipment

Scope: This European standard specifies the characteristics of equipment used in penetrant testing. The characteristics of equipment required for carrying out penetrant testing depend on the number of tests to be made and on the size of the components to be tested.

Two types of equipment are included in this standard:

a) equipment suitable for carrying out in situ penetrant testing techniques;

b) fixed installations.

7. **KS ISO 3452-5:2008**

Title: Non-destructive testing -- Penetrant testing -- Part 5: Penetrant testing at temperatures higher than 50 degrees

Scope: ISO 3452-5:2008 specifies the requirements for non-destructive testing using penetrant, particular to applications at higher temperatures (higher than 50 °C) as well as the method for qualification of suitable testing products.

8. **KS ISO 3452-6:2008**

Title: Non-destructive testing -- Penetrant testing -- Part 6: Penetrant testing at temperatures lower than 10 degrees C

Scope: ISO 3452-6:2008 specifies the requirements for non-destructive testing using penetrant, particular to applications at low temperatures (lower than + 10 °C) as well as the method for qualification of suitable testing products.

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**.