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Addendum 1

4.1.1: The last paragraph shall be changed to the following:

The purchaser may specify any particular material requirements.

NOTE Well-measuring wire and wires used in the manufacture of well-servicing strand are typically composed of carbon steel but other materials (e.g. stainless steel) may be used.

4.1.2: The section shall be changed to the following:

The purchaser may specify the type of core.

Fiber cores shall conform to ISO 4345.

The fiber cores for single-layer stranded ropes larger than 8 mm diameter shall be doubly closed (i.e. from yarn into strand and from strand into rope). Natural fiber cores shall be treated with an impregnating compound to inhibit rotting and decay.

Steel cores shall be either an independent wire rope (IWRC) or wire strand (WSC).

Steel cores of single-layer stranded ropes larger than 12 mm diameter shall be an IWRC, unless specified otherwise.

NOTE Cores of stranded ropes are typically composed of steel or fiber, although other types, such as composites (e.g. steel plus fibers or plastics) or cores made of solid polymer, may also be supplied.

5.1: The section's sole paragraph shall be changed to the following:

The completed wire, strand, and wire rope covered in this specification are subject to physical testing and do not require validation of the processes used in manufacturing. Except for wire joints (see 4.2.2), the processes used in manufacturing shall not require validation. Welding and brazing shall be validated to demonstrate the ability of these processes to achieve specified results. A third-party validation or certification of welding personnel is not required.

5.2.1: The section shall be changed to the following:

Conformance with the wire, core, and lubricant requirements shall be through a visual verification of the inspection documents supplied with the wire, core, and lubricant.

5.2.2: The section shall be changed to the following:

Conformance with the requirements for wire joints and preformation shall be through visual verification.

5.2.4.2: The section shall be replaced with the following:

The measured breaking forces of all individual wires shall be added together after they have been removed from the wire rope, and this value shall be multiplied by either of the following:

- a) the spinning loss factor derived from Annex F, or
- b) the partial spinning loss factor obtained from the results of type testing.

The partial spinning loss factor used in the calculation shall be the lowest of the three values obtained from type testing. In the case of triangular strand ropes, the triangular center of the strand may be considered as an individual wire. The wires shall be tested in accordance with the wire tensile test specified in B.2 or in ISO 6892.

NOTE The result from this test is known as the “calculated measured (post-spin) breaking force.”

When this method (i.e., Method 2) is used for the periodic test (see Table 4) and the calculated measured (post-spin) breaking force value is less than the intended minimum breaking force value, another test shall be repeated using Method 1.

If the measured (actual) breaking force in this second test fails to meet the intended minimum breaking force value, the minimum breaking force shall be de-rated to a value not exceeding the measured (actual) breaking force value and type testing shall be repeated using Method 1.

In such cases, the wire rope shall be de-rated to a grade that shall not exceed the actual breaking force value. The de-rated grade of the wire rope shall be documented in the wire rope certificate. See Section 6.

5.2.4.3: The section shall be replaced with the following:

The measured breaking forces of all the individual wires shall be added together before they are laid into the wire rope, and this value shall be multiplied by the total spinning loss factor obtained from the results of type testing. The total spinning loss factor used in the calculation shall be the lowest of the three values obtained from type testing.

The wires shall be tested in accordance with the wire tensile test specified in ISO 6892.

NOTE The result from this test is known as the “calculated measured (pre-spin) breaking force.”

When this method (i.e., Method 3) is used for the periodic test (see Table 4) and the calculated measured (pre-spin) breaking force value is less than the intended minimum breaking force value, another test shall be performed using Method 1.

If the measured (actual) breaking force in this second test fails to meet the intended minimum breaking force value, the minimum breaking force shall be de-rated to a value not exceeding the measured (actual) breaking force value and type testing shall be repeated using Method 1.

In such cases, the wire rope shall be de-rated to a grade that shall not exceed the actual breaking force value. The de-rated grade of the wire rope shall be documented in the wire rope certificate. See Section 6.

5.2.5: The section shall be replaced with the following:

When tests, if any, are required to be performed on wires taken from the wire rope after fabrication, sampling, test methods, and acceptance criteria shall be specified by the purchaser.

If tests on the wires are required to be performed, this should be stated in the purchaser’s order.

NOTE See Annex H for guidance on testing and acceptance criteria.

5.5: *The first paragraph shall be replaced with the following:*

The manufacturer shall offer the purchaser or purchaser's representative the necessary facilities for the witnessing of tests (when these are performed) or for the examination of records of type tests, or both.

6.1.1, *NOTE after item e): The NOTE shall be changed to the following:*

NOTE See Annex J for information that should be provided by the purchaser.

Table A.2: In the "Nominal Diameter of Wire" column:

$$0.95 \leq \delta < 0.100$$

shall be replaced with

$$0.95 \leq \delta < 1.00$$

B.3: *The first paragraph shall be replaced with the following:*

The distance between the jaws of the testing machine should be 203 mm \pm 1 mm (8 in. \pm 1/16 in.). To save time during tests, the distance may be shortened to as small as 100 wire diameters.

Tables C.1 through C.16: The "Diameter Tolerance; Min., Max." column shall be deleted.

G.2: *The fifth paragraph shall be replaced with the following:*

The wire ropes shall be deemed to conform if the measured breaking forces, when tested in accordance with 5.2.4.1 (Method 1), 5.2.4.2 (Method 2), or 5.2.4.3 (Method 3), meet or exceed the minimum value.

Annex H: The title shall be changed to "Tests on Wires from the Wire Rope".

H.3.1.1: *The second paragraph shall be changed to the following:*

When the same wire fails in more than one test (e.g., torsion and tensile), this shall be counted as one failure.

H.3.4.1: *The section shall be changed to the following:*

The length between the grips should be 100d for the test piece. If this length cannot be adopted, an alternative length may be chosen at the wire manufacturer's discretion (e.g., for wire Levels 2, 3, 4, and 5). In this case, the number of torsions that the wire shall withstand shall be proportional to the numbers specified for a test length of 100d.

H.3.4.2: *The fourth paragraph shall be changed to the following:*

Tests on wire diameters less than 0.5 mm shall conform with H.3.5.

Annex I: The annex type shall be changed from "(informative)" to "(normative)".

I.1: *The section shall be changed to the following:*

Diameters, diameter tolerances, minimum breaking forces, and elongation shall be in accordance with Table I.1 unless otherwise agreed upon by the purchaser and manufacturer. Zinc coating

weights shall be in accordance with Table A.6 unless otherwise agreed upon by the purchaser and manufacturer.

Annex K: This annex shall be deleted from the document.