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|  **IECEx TEST REPORT** **ISO 19880-5****Gaseous hydrogen — Fuelling stations — Part 5: Dispenser hoses and hose assemblies** |
| ExTR Reference Number : |  |
| ExTR Free Reference Number : |  |
| Compiled by + signature (ExTL) : |  |
| Reviewed by + signature (ExTL) : |  |
| Date of issue : |  |
| Ex Testing Laboratory (ExTL) : |  |
| Address : |  |
| Applicant’s name : |  |
| Address : |  |
| Standard : | ISO 19880-5:2019, First Edition |
| Test procedure : | IECEx System |
| Test Report Form Number : | ExTR-ISO19880-5-1A (released 2024-06) |
| Related Amendments, Corrigenda or ISHs  | N/A  |
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| Possible test case verdicts: |  |
| - test case does not apply to the test item : N / A |  |
| - test item does meet the requirement : Pass |  |
| General remarks:The test results presented in this Ex Test Report relate only to the item or product tested.* "(see Attachment #)" refers to additional information appended to this document.
* "(see appended table)" refers to a table appended to this document.
* Throughout this document, a point “.” is used as the decimal separator.

The technical content of this Ex Test Report shall not be reproduced except in full without the written approval of the Issuing ExCB and ExTL. |

| **ISO 19880-5** |
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| **Clause** | **Requirement – Test**  | **Result – Remark**  | **Verdict** |
|  |
| 1 | Scope |
|  |
| 2 | Normative references |
|  |
| 3 | Terms and definitions |
|  |
| 4 | Classification |  |  |
|  |
| 5 | Materials and construction |
|  |
| 5.1 | General |  |  |
|  |
| 5.2 | Lining |  |  |
|  |
| 5.3 | Reinforcement |  |  |
|  |
| 5.4 | Cover |  |  |
|  |
| 5.5 | Static electricity dissipation |
| 5.5.1 | General |  |  |
| 5.5.2 | External surface |  |  |
| 5.5.3 | Internal surface |  |  |
|  |
| 6 | Dimensions and tolerances |  |  |
|  |
| 7 | Performance requirements and testing |
|  |
| 7.1 | General |  |  |
|  |
| 7.2 | Leakage test |
| 7.2.1 | General |  |  |
| 7.2.2 | Method A |  |  |
| 7.2.3 | Method B |  |  |
|  |
| 7.3 | Hydrostatic strength |
| 7.3.1 | Proof pressure test |  |  |
| 7.3.2 | Ultimate strength |  |  |
|  |
| 7.4 | Electrical conductivity |  |  |
|  |
| 7.5 | Tensile test of hose assembly |
| 7.5.1 | General |  |  |
| 7.5.2 | Test method |  |  |
|  |
| 7.6 | Vertical load strength |
| 7.6.1 | General |  |  |
| 7.6.2 | Test method |  |  |
|  |
| 7.7 | Torsion strength |
| 7.7.1 | General |  |  |
| 7.7.2 | Test method |  |  |
|  |
| 7.8 | Pressure cycle test (Hydraulic-pressure impulse test) |
| 7.8.1 | General |  |  |
| 7.8.2 | Apparatus |  |  |
| 7.8.3 | Test fluid |  |  |
| 7.8.4 | Test temperature |  |  |
| 7.8.5 | Test piece |  |  |
| 7.8.6 | Procedure |  |  |
|  |
| 7.9 | Hydrogen impulse test |  |  |
|  |
| 7.10 | Corrosion test |
| 7.10.1 | General |  |  |
| 7.10.2 | Test conditions |  |  |
|  |
| 7.11 | Minimum bend radius |  |  |
|  |
| 7.12 | Hose permeation |
| 7.12.1 | General |  |  |
| 7.12.2 | Test Method A |  |  |
| 7.12.3 | Test method B |  |  |
|  |
| 7.13 | Ozone resistance |  |  |
|  |
| 7.14 | Ultraviolet light and water exposure test |
| 7.14.1 | Applicability and verification |  |  |
| 7.14.2 | Test conditions |  |  |
| 7.14.3 | Length of exposure |  |  |
|  |
| 7.15 | Crush test |
| 7.15.1 | General |  |  |
| 7.15.2 | Test method |  |  |
|  |
| 7.16 | Abrasion resistance test |  |  |
|  |
| 7.17 | Marking material legibility |
| 7.17.1 | General |  |  |
| 7.17.2 | Test method |  |  |
|  |
| 7.18 | Electrical properties of lining material |
| 7.18.1 | General |  |  |
| 7.18.2 | Dielectric breakdown voltage |  |  |
| 7.18.3 | Volume resistivity |  |  |
| 7.18.4 | Criteria of electric properties of lining materials |  |  |
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| 8 | Marking |
|  |
| 8.1 | General |  |  |
|  |
| 8.2 | Hose assemblies |  |  |
|  |
| 8.3 | Hose |  |  |
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| 8.4 | Hose end fittings or couplings |  |  |
|  |
| 9 | Instruction manual |
|  |
| 9.1 | General |  |  |
|  |
| 9.2 | Selection |  |  |
|  |
| 9.3 | Installation |  |  |
|  |
| 9.4 | Inspection and maintenance |  |  |
|  |
| 9.5 | Safety precautions and usage |  |  |
|  |
| 10 | Test report |  |  |
|  |
| Annex A(Normative) | Type tests and routine tests |
|  |
| Annex B(Informative) | Production acceptance tests |
|  |
| Annex C(Informative) | Hydrogen impulse test |
| C.1 | Test pieces |  |  |
| C.2 | Apparatus |
| C.2.1 | Pressure-application apparatus |  |  |
| C.2.2 | Graphical recorder, digital-storage facility, or oscilloscope |  |  |
| C.3 | Test fluid |  |  |
| C.4 | Test procedure |  |  |

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| Measurement Section, including Additional Narrative Remarks (as deemed applicable) |

**Appendix A – Test Results**

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| **A.XX <Insert Test Here>** |
| **Lab Record:** |  |
| **Standard used and Clause:** |  | **Date of Test:** |  |
| **Sample No:** | **Description** |
|  |  |
|  |  |
| **Procedure (Brief Description of set-up used, values set)** |
|  |
| **Result** |
|  |