ISO 17268:2020-02 (E)

Gaseous hydrogen land vehicle refuelling connection devices

Contents

Page

Foreword ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 General construction requirements **3**

5 Nozzles **5**

6 Receptacles **7**

7 Design verification test procedures **8**

7.1 General requirements 8
7.2 Test conditions 8
7.3 Nozzle tests 8
7.4 Receptacle tests 8
7.5 User — Machine interface 8
7.6 Dropping 9
7.7 Leakage at room temperature 9
7.8 Valve operating handle 10
7.9 Receptacle vibration resistance 10
7.10 Abnormal loads 10
7.11 Low and high temperatures 11
7.11.1 Purpose 11
7.11.2 General 11
7.11.3 Leakage tests 11
7.11.4 Operation tests 11
7.12 Durability and maintainability 12
7.12.1 Purpose 12
7.12.2 Nozzle durability test 12
7.12.3 Receptacle check valve durability test 13
7.12.4 Receptacle durability test 13
7.12.5 Connected nozzle and receptacle durability test 13
7.13 Sealing material aging test 13
7.13.1 Purpose 13
7.13.2 Oxygen aging test procedure 14
7.13.3 Ozone aging test procedure 14
7.14 Non-metallic material hydrogen resistance test 14
7.15 Electrical resistance 14
7.16 Hydrostatic strength 14
7.17 Corrosion resistance 15
7.17.1 Purpose 15
7.17.2 General 15
7.17.3 Nozzle test 15
7.17.4 Receptacle test 15
7.18 Deformation 15
7.19 Contamination test 15
7.20 Thermal cycle test 16
7.21 Pre-cooled hydrogen exposure test 16
7.22 Misconnected nozzle test 16
7.23 Upward/downward nozzle compatibility test 17

7.23.1 General 17
7.23.2 Upwards nozzle compatibility test 17
7.23.3 Downwards nozzle compatibility test 17
7.24 Washout test 18
7.25 User abuse test 18
7.26 Freezing test 18
7.27 Rocking test 19
7.28 Communication test 20
8 Instructions **20**
9 Marking **21**
Annex A (normative) **Receptacle/nozzle interface envelope** **22**
Annex B (normative) **Hydrogen receptacles** **23**
Annex C (normative) **Loose fit test fixtures** **29**
Annex D (normative) **Tight fit test fixtures** **34**
Annex E (normative) **Wear pattern test fixtures** **39**
Annex F (informative) **Example hex design** **44**
Bibliography **45**