

DIN EN 16728:2020-11 (E)

LPG equipment and accessories - Transportable refillable LPG cylinders other than traditional welded and brazed steel cylinders - Periodic inspection (includes Amendment :2020)

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Requirements for periodic inspection	9
4.1	General	9
4.2	Steel and aluminium cylinders	10
4.3	Over-moulded cylinders	10
4.4	Composite cylinders	10
4.5	Rejected cylinders	10
5	Inspections and tests	12
5.1	General	12
5.2	External visual inspection	12
5.2.1	Preparation for external visual inspection	12
5.2.2	Inspection procedure	12
5.2.3	Rejection criteria	13
5.3	Proof pressure test	13
5.3.1	General	13
5.3.2	Hydraulic proof pressure test	14
5.3.3	Pneumatic proof test and leak test	15
5.4	Check of the internal condition of the cylinder	16
5.4.1	Welded aluminium and steel cylinders of alternative design and construction	16
5.4.2	Check of the internal condition of composite cylinders	16
5.5	Inspection of cylinder threads	17
5.5.1	General	17
5.5.2	Internal threads	17
5.5.3	External threads	17
5.5.4	Damaged threads	17
5.6	Inspection of valves	17
6	Final operations	18
6.1	General	18
6.2	Valving	18
6.3	Tare mass	18
6.4	Marking	18
6.5	Purging	18
7	Repair of cylinders	18
8	Records	19

Annex A(normative) Specific requirements for external visual inspection for welded steel LPG cylinders in accordance with EN 14140 or equivalent standard	20
A.1 General	20
A.2 Procedure for establishing rejection criteria carbon steel cylinders	20
A.3 Rejection criteria for stainless steel cylinders	23
Annex B(normative) Specific requirements for external visual inspection of welded aluminium LPG cylinders	25
Annex C(normative) Specific requirements for visual inspection of composite LPG cylinders	28
C.1 Establishment of rejection criteria	28
C.1.1 General	28
C.1.2 Procedure	28
C.2 Examples of rejection criteria	28
C.2.1 Cylinders without a metallic liner	28
C.2.2 Cylinders with a metallic liner	33
Annex D(informative) Conditions for 15-year periodic inspection interval of welded steel cylinders manufactured before 1st January 2015	37
D.1 General	37
D.2 Concept of control	37
D.3 Conditions	37
Annex E(informative) Guidance on conditions for 10-year periodic inspection interval of composite cylinders	39
Annex F(normative) Specific Periodic inspection procedure for over-moulded cylinders (OMC)	40
F.1 General	40
F.1.1 Introduction	40
F.1.2 Valve	40
F.1.3 Marking and records	40
F.2 Periodic inspection	40
F.2.1 General	40
F.2.2 External visual inspection	42
F.2.3 Burst test	43
F.2.4 Supplementary tests	43
F.2.5 F.2.5 Statistical evaluation of test results - Method and minimum requirements	44
F.2.6 F.2.6 Measures if the acceptance criteria are not met	46
F.2.7 F.2.7 Periodic inspection tests reports and records	47
Annex G(informative) Example of an Over-Moulded Cylinder	48
Bibliography	50