

# 钢质无缝气瓶批量检验质量证明书

## Seamless Steel Gas Cylinder Batch Inspection Certificate

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WFP/R-05-01

文件编号: SYAH-WFP-2025-B1630 钢瓶名称: 钢质无缝气瓶 Seamless Steel Gas Cylinder  
 Document number: SYAH-WFP-2025-B1630 Cylinder Name: 钢质无缝气瓶 Seamless Steel Gas Cylinder  
 材料移植号: B194 盛装介质 Filling content: ■ 二氧化碳 CO<sub>2</sub> ■ 氩气 Ar  
 Material transfer No.: B194  
 生产批号 Batch No.: B251630 底部结构 Bottom Construction: 凹形底 Concave Base ends  
 气瓶型号 Cylinder type: ISO219 图号 Drawing No.: ISO219-Mn-00-5.7  
 制造许可证编号: TS2237T57-2028 制造日期: Manufacturing Date: 2025.11.10  
 Manufacturing License No.: TS2237T57-2028

本批钢瓶共: 202只, 编号: B251630001至B251630202; 试验用瓶2只, (瓶号是: B251630005、B251630008)  
 The quantity is 202 with serial No. from B251630001 to B251630202; Including test on 2 Cylinders. (Serial No.: B251630005, B251630008)

注 Note: 本批合格瓶中不包括下列瓶号 This batch excludes the following number B251630005、B251630008

#### 1. 主要技术数据 Main Technical Data:

公称容积 Nominal Volume: 40 L 公称工作压力 Nominal working pressure: 150 Bar  
 公称直径 Nominal Diameter: 219 mm 水压试验压力 Hydrostatic Test Pressure: 250 Bar  
 设计最小壁厚 Min Design Wall Thickness: 5.7 mm 气密试验压力 Leakage Test Pressure: 150 Bar

#### 2. 主体材料化学成份 (%) Chemical composition (%) (37Mn)

	C	Si	Mn	P	S	S+P
最小 Min.	0.34	0.17	1.40	/	/	/
最大 Max.	0.40	0.37	1.70	0.020	0.015	0.030
实测值 Measured value	0.36	0.23	1.64	0.010	0.002	0.012

3. 热处理方法 Heat Treatment Method: 正火 Normalizing 热处理介质 Heat treatment medium: /

#### 4. 机械性能试验 Mechanical Test:

试验瓶号 Cylinder No.	标准 规定值 Standard	Tensile Strength	Yield Strength	Elongation 延伸率 A (%)	Impact Value (J/cm <sup>2</sup> )		冷弯 Bend Test
		抗拉强度 R <sub>m</sub> (MPa)	屈服强度 R <sub>e</sub> (MPa)		冲击值 (-50°C)		
B251630005	实测值 Actual	766	537	25.0	≥16 (单个 Min.)	≥20 (平均 Avg.)	180° without cracking
		765 ≤ R <sub>m</sub> < 800	≥505	≥20	≥16 (单个 Min.)	≥20 (平均 Avg.)	合格 Qualified

5. 底部解剖检查: 经酸蚀后, 无肉眼可见的缩孔、气泡、未熔合、裂缝、夹杂物或白点, 结构形状尺寸符合图纸要求。  
 Base check: After acid etching, there is no visible shrinkage cavity, air bubble, incomplete fusion, cracks, inclusions or white dots, the shape and size of the structure accord with the drawing.

6. 爆破试验 Hydrostatic Burst Test 试验瓶号 Cylinder No.: B251630008

标准规定值 Standard	屈服压力: Yield Pressure:	≥29.5 MPa	爆破压力: Burst Pressure:	≥40.8 MPa
实测值 Actual	屈服压力: Yield Pressure:	33.8 MPa	爆破压力: Burst Pressure:	44.23 MPa
破口形状 Fracture Shape:	爆破口为塑性变形, 无碎片, 破口形状符合标准要求。 The fracture was in the form of plastic deformation, with no fragment, and the fracture shape shall conform to requirements of applicable standard.			

经检查和试验符合 ISO 9809-3:2019 标准的要求。  
 The products were verified by inspection and test that they complied with the standard (ISO9809-1:2019).

监督检验单位 (盖章) 临沂市特种设备检验研究院  
 Supervision and Inspection Authority

监督检验员/日期:  
Supervisor/Date:

刘以平 2025.11.12

制造单位 (检验专用章)  
 Inspection Special Seal of Manufacturer

检验责任工程师/日期: 2025年11月10日  
 QC Engineer/Date:

陈玉芳