

Geprüfte Gefäße / Tested Receptacles: 250 Flaschen / Cylinders

Anzahl/Number

Gefäßart / Type of receptacle

Prüfgrundlage / Legal basis

- ☒ ADR/RID, Stand / Status: 2025 ☒ TPED (2010/35/EU) ☐ IMDG-Code
☐ Vorschriften für UN-Druckgefäße / Regulations for UN pressure receptacles ☒

Angewendete Norm und deren Status / Applied standard and its status: EN ISO 9809-1:2019

Hersteller / Manufacturer: Shandong Huachen High Pressure Vessel Group Dezhou Co., Ltd.

Fertigungsstätte / Manufacturing Plant: North of Guangyun Street, Wucheng County, 253300, Dezhou City, Shandong, P.R.China.

Vorgelegte Dokumentation / Provided documentation: Zeichnung / Drawing **WP23-01-02 Rev.0**

- ☒ Baumusterzulassung / Type approval No. **0036-039-23 Rev.0**
☒ Konformitätserklärung des Herstellers / Declaration of conformity of the manufacturer

Überwachung der Herstellung / Supervision of manufacture

- ☒ Prüfung der Konformität mit dem zugelassenen Baumuster / Verification of conformity to approved type
☒ Kontrolle der Rückverfolgbarkeit von Werkstoffen / Verification of material traceability
☒ Wenn zutreffend: Überprüfung, ob das mit der Ausführung dauerhafter Verbindungen und zerstörungsfreie Prüfungen betraute Personal qualifiziert oder zugelassen ist. / If applicable: verification that the personnel undertaking permanent joining of parts and non-destructive tests are qualified or approved.

Erstmalige Prüfung: Losprüfung / Initial Inspection: Batchtests

- ☒ Prüfung der mechanischen Eigenschaften des Werkstoffs
Testing of the mechanical characteristics of the material
☒ Überprüfung der Mindestwanddicke / Verification of the minimum wall thickness
☒ Überprüfung der Gleichmäßigkeit des Werkstoffs innerhalb jeder Fertigungsreihe
Verification of the homogeneity of the material for each manufacturing batch
☒ Kontrolle der äußeren und inneren Beschaffenheit / Inspection of the external and internal condition
☒ Kontrolle des Halsgewindes / Inspection of the neck thread
☒ Überprüfung auf Übereinstimmung mit der Auslegungsnorm
Verification of the conformance with the design standard
☐ Bei geschlossenen Kryo-Behältern: Kontrolle der Schweißnähte des Innenbehälters durch zFP
For closed cryogenic receptacles: Inspection of the welds of the inner receptacle by means of ndt

Erstmalige Prüfung: Individuelle Prüfung / Initial Inspection: Individual Tests

- ☒ Flüssigkeitsdruckprobe (gegebenenfalls ersetzt durch Gasdruckprüfung)
Hydraulic pressure test (where applicable replaced by gas pressure test)
☒ Kontrolle und Bewertung von Herstellungsfehlern / Inspection and assessment of manufacturing defects
☒ Kontrolle der Kennzeichnung / Inspection of the markings
☐ Bei Gefäßen für Acetylen: Kontrolle der richtigen Anbringung und Beschaffenheit d. porösen Materials
Receptacles for acetylene: Inspection of the proper installation and condition of the porous material
☐ Bei Gefäßen für Acetylen: Kontrolle der Menge des Lösungsmittels
Receptacles for acetylene: Control of the quantity of solvent
☐ Bei geschlossenen Kryo-Behältern: Dichtheitsprüfung und Funktionsprüfung der Bedieneinrichtung
For closed cryogenic receptacles: Leakproofness tests, test of the operation of the service equipment

Kennzeichnung / Marking

- | | | |
|--|---|---|
| a) Symbol der Vereinten Nationen für Verpackungen
United Nations packaging symbol: |  | ☐ vorhanden / present
☒ nicht vorhanden / not present |
| b) Norm / Standard | | EN ISO 9809-1 |
| c) Staat der Zulassung / Country of Approval | | D |
| d) Stempel der Prüfstelle / Stamp of testing Body: | |  |
| e) Datum der Erstmöglichen Prüfung / Date of Initial Test (YYYY/MM): | | 2025/06 |
| f) Prüfdruck / Hydrostatic Test Pressure: | | PH300BAR |
| g) Leermasse mit festem Zubehör / Empty Mass with integral Parts: | | 52.2 KG |
| h) Gara. Mindestwanddicke* / Minimum guaranteed wall thickness*: | | 5.2 MM ☐ n.a. |
| i) Betriebsdruck / Working Pressure
(PW oder / or MAPW bei Kryo-Behältern / for cryogenic receptacles) | | PW200 |
| j) Fassungsraum* / Water Capacity*: | | 50.0 L ☐ n.a. |
| k) UN 1001 Acetylene: Gesamtmasse / Total Mass: | | KG ☒ n.a. |
| l) UN 3374 Acetylene: Gesamtmasse / Total Mass: | | KG ☒ n.a. |
| m) Flaschengewinde* / Cylinder Thread*: | | 25E ☐ n.a. |
| n) Kennzeichen des Herstellers und Staat* der Herstellung
Manufacturers mark and country* of manufacturer | | CN HC ☐ n.a.
☐ n.a. |
| o) Seriennummern / Serial No. | | DKd4067001~ DKd4068050; |
| p) "H" für Wasserstoffverträglichkeit / "H" for Hydrogen Compatibility: | | ☒ n.a. |
- * wenn von ADR/RID gefordert, ansonsten "n.a."
if required according to ADR/RID, otherwise: "n.a."

Zusätzliche Kennzeichen / Additional marking

- | | | |
|---------|--|---|
| TT 0036 | ☒ vorhanden / present; | ☐ nicht vorhanden / not present |
| "-40°C" | ☒ vorhanden / present; | ☐ nicht vorhanden / not present |
| FINAL | ☐ vorhanden / present; | ☒ nicht vorhanden / not present |
| UT | | ☒ keine weiteren / no further |

Die nach der Prüfgrundlage erforderliche Überwachung der Herstellung, der losweisen Prüfungen und der individuellen Prüfungen wurde ohne Beanstandungen durchgeführt und bestätigten die Übereinstimmung mit der technischen Dokumentation. / The supervision of manufacture, the tests to be performed on an adequate sample of receptacles and the individual inspections and tests were performed according to the legal basis without complaint and proofed the compliance with the technical documentation.

TÜV SÜD Industrie Service GmbH
Prüfstelle Xa und Notifizierte Stelle Nr. 0036 nach Richtlinie 2010/35/EU
Inspection Body Xa and Notified Body 0036 according to directive 2010/35/EU

SHANGHAI

Ort / Location

2025-06-18

Datum / Date


Xu Zhujun



Annex

1. Declaration of Conformity
2. Mechanical Test Report;
3. Bursting test report
4. Dimension Test Report;
5. Mill Certificate;
6. Hydraulic Test Report;
7. Other document

Total pages include this cover page:

Shanghai, 2025-06-18

Xu Zhujun



**Declaration of conformity
according to Directive 2010/35/EU
for the transportable pressure equipment**

PLANT SAFETY	
☐ spot checked	
☒ reviewed	
☐ witnessed	
by	
dated	

Report No. : BGSM DKd4067~DKd4068

The manufacturer

Shandong Huachen High Pressure Vessel Group Dezhou Co.,Ltd
North of Guangyun Street,Wucheng County,253300,Dezhou City,Shandong Province,P.R.China.

herewith declares, that the transportable pressure equipment

Description:	cylinders	used for	O ₂
Year of manufacture:	2025		
Type-, Serial-, Identification-No:	WGII 232-50-200A DKd4067001~DKd4068050 (250pcs)		
Chamber designation:			
max. allowable pressure PW:	200	bar	
allowable max./min. temperature TS:			
Test pressure PH:	300	bar	
Date of pressure test:	2025-06		
Pressure test medium:	Water		
Fluid- fluid group	O ₂		

corresponds to the Transportable Pressure Equipment Directive 2010/35/EU.

Applied conformity assessment

procedures:

Type Approval +Supervision of Manufacture and Initial Inspection and Test

Applied standards and technical

specifications:

EN ISO 9809-1:2019

Other applied EC-Directives:

Certificates which are included

EC-Type Examination Certificate No.:

0036-039-23

Rev.0

Location, Date:

Dezhou, 2025-06



009-45



中信泰富特钢
CITIC PACIFIC SPECIAL STEEL

靖江特殊钢有限公司
JINGJIANG SPECIAL STEEL CO., LTD



地址：中国江苏省泰州市靖江经济开发区新港路21号。
Add: No. 21 Xingang Road Jingjiang Economic
Development Zone, Taizhou City, Jiangsu Province,
PRC.



编号: R08-375/O-24

合同行号 Contract-Item No. JT2025170345004

原证书编号 Sheet No. 2560143025

产品质量证明书

MILL TEST CERTIFICATE

ACC. TO EN 10204 3.1

TS 许可证号: IS2732L60-2028 (TSX)

客户 Purchaser	山东华泰高压容器集团德州有限公司	炉号 Heat No.	WY5205507	车船号 Truck/Ship No.	德PX5681	制造方法 Process Of Manufacture	热轧无缝 HR. SMLS	交货状态 Delivery Status	热轧 Hot rolling
产品名称 Product	气瓶用无缝钢管 Seamless steel tubes for gas cylinder	批号 Lot No.	2325051015	规格 (mm) Size (mm)	232*5.4	钢级 (牌号) Grade Steel Kind	34CrMo4	端部类型 End Type	平端 Plain Ends
标准 Specification	GB/T 18248-2021 (QJX/JT-C0086-2024-01)	件数 Bundles	13	支数 Pieces	88	总长 (m) Total Lengths (m)	996.905	重量 (t) Total Weight (t)	33.140

V、尺寸, 外形和表面质量 Dimension, Appearance And Surface Quality

合格 qualified

1、尺寸, 外形和表面质量 dimension, appearance and surface quality



李小明



日期 Date	2025/05/21	开具员 Inspector	王艳红	质量负责人 Manager Of Inspection	胡双凯	发货单号 Dispatch Bill No.	GC20250521005
备注 Note	兹证明本质量证明书所列产品, 均按标准规定制造、检验和试验, 符合标准及合同要求, 准予出厂。未经许可, 本产品未经加工不允许直接出口到其他国家和地区。 We here certify that the products here in described has been manufactured, Sampled tested and inspected in accordance with the specification and purchase order, and meet with the requirement. All pipes be made free of radiation contamination, Without permission, the product without processing is not allowed to directly export to other countries and regions.						

山东华宸高压容器集团有限公司

钢管材料化学成分分析检验报告

文件编号: Q/HCGY.检-JL08

PLANT SAFETY

☐ spot checked

☒ reviewed

☐ witnessed

by _____

dated _____

报告 编号	WY5205507	生产 厂家	靖江特殊钢 有限公司	钢管质量 证明书编 号	25GC143025				
钢管 材质	34CrMo4	钢管 规格	Φ232×5.4	钢管材 料标准	GB/T18248-20 21				
检验 方法	光谱分析	检验 标准	GB/T 4336-2016	设备型号	SparkCCD6500				
设备检定 有效期至	2025-09-26	试样 规格	4cm×4cm 薄板	试样表 面状态	均匀、无缩孔、 无裂纹				
试样 数量	1	送样 日期	2025-05-22	检测日期	2025-05-22				
炉号	元素含量 (%)								
WY5205507	C	Si	Mn	P	S	Cr	Ni	Mo	Cu
	0.33	0.30	0.78	0.009	0.002	1.05	0.01	0.20	0.02
备注:									
检验结论:									
取样符合 GB/T4336-2016 标准要求。									
试验结果符合 GB/T18248-2021 标准要求。									

试验员:王玉昭 理化责任人:李敦文 材料责任人:李敦文 监检员:

瓶体壁厚、内外表面、制造公差检验报告

Wall thickness, Inner and outer surface, Tolerance Inspection Report

Q/HCGY.检-JL11

Report No.: BGBH DKd4067~DKd4068

检验依据: 1、EN ISO9809-1:2019 第8.2、8.3、8.5、8.6、8.7、8.8;
Test basis: Meet EN ISO9809-1:2019 requirements in 8.2、8.3、8.5、8.6、8.7、8.8;
2、Q/HCGY05-05-2021《瓶体壁厚、制造公差、内外观检验规程》。
Q/HCGY05-05-2021《Wall thickness, Manufacture tolerance, Inspection of the appearance》

规格 Type	WGII 232-50- 200A	生产批号 Batch No.	DKd4067~DKd4068	数量 Quantity	254	瓶体编号 Serial No.	DKd4067001~DKd4068050	
壁厚 (mm) Wall thickness	制造缺陷 Manufacture defects	圆度 (mm) Out-of roundness	垂直度偏差 (mm/m) Stability deviation	瓶底与地面接触直径 (mm) The outer diameter of the Surface in contact with the ground	直线度偏差 (mm/m) Straightness deviation	平均直径 (mm) Mean diameter	瓶体高度 (mm) Height	螺纹 Thread
最小保证壁厚: 5.2 Guaranteed minimum thickness 实测最小壁厚: 5.6 Actual minimum wall thickness	符合 EN ISO9809-1:2019 附录A要求 Meet annex A of EN ISO9809-1:2019	合格标准: 0~ 4.64 Qualified scope 实测最小值: 0.8 Actual minimum value 实测最大值: 1.6 Actual maximum value	标准偏差范围: 0~10 deviation scope 实测最小值: 4.2 Actual minimum value 实测最大值: 5.3 Actual maximum value	合格范围: ≥ 174 Qualified scope 实测最小值: 175.32 Actual minimum value 实测最大值: 176.41 Actual maximum value	标准偏差范围: 0~3 deviation scope 实测最小值: 0.7 Actual minimum value 实测最大值: 1.8 Actual maximum value	偏差范围: 229.68~234.32 deviation scope 实测值: 230.87~232.36 Measured value	偏差范围: 1430 $\pm$ 15 deviation scope 实测值: 1428~1430 Measured value	螺纹型号: 25E Threadmode 检验结果: 合格 Inspection results
合格数量 The number of qualified	254	254	254	254	254	254	254	254
不合格瓶编号及不合格原因 Does not meet cylinders No. and reason	无None							
超标瓶体处理方法 Does not meet cylinders processing method	返修 ☐ 报废 ☐ Repair Reject							
返修结果 repair result	无None							
注: 超标瓶体编号及超标原因可另加附页。 Note: Does not meet cylinders No. and reason may additional attach the page								



检验员 (Inspector): 李国兴

日期 (Date): 2023.06.04

审核 (Reviewer):

陈生杰

日期 (Date): 2023.06.04

文件编号Document Number: Q/HCGY.检-JL12

力学性能试验报告单

Report on Mechanical Properties of Single

材质Material: 34CrMo4 批号Batch NO.: DKd4067~DKd4068试验瓶号Test cylinder No.: DKd4067-1~DKd4068-1

报告编号Report No.: BGLXDKd4067~DKd4068 试验瓶规格Cylinder Test: WGII232-50-200A

试验设备有效期Validity of test equipment: 2024-9-27—2025-9-26



试验依据Test basis: EN ISO9809-1:2019; Type No. WGII232-50-200A

拉伸试验Tensile Test

试样编号 Sample No.	屈服点 Yield point Reg (MPa)	抗拉强度 Tensile strength Rmg (MPa)	延伸率Elongation A%
DKd4067-1	861	996	16
DKd4068-1	859	992	17

冲击试验Impact Test

试样编号 Sample No.	冲击功 Impact energy (J)	冲击韧性值 Impact lest at (J/cm ²) (-50℃)
DKd4067-1	27	54
	28	56
	29	57
DKd4068-1	26	52
	27	54
	28	57

弯曲试验Bending Test

试样编号 Sample No.	实测试样尺寸 (mm ²) Measured specimen size	弯曲角度 Bending angle (°)	弯心直径 (mm) Bending diameter	试验结果Test result
DKd4067-1	6.2×25.0	180	D=7a	Qualified
	6.3×25.0	180	D=7a	Qualified
DKd4068-1	6.2×25.0	180	D=7a	Qualified
	6.1×25.0	180	D=7a	Qualified

结论Conclusion: 试验结果符合 EN ISO9809-1:2019标准要求 合格
The results comply with EN ISO9809-1:2019 standards compliance Qualified

试验员: 王玉昭 理化责任人: 李敏 日期: 2025年06月05日
Tester Physical responsible Date

气瓶水压爆破试验报告

Hydraustatic Burst Test Report of Gas Cylinders

委托单位 (Consigner): 品控部/Quality Control Department

气瓶制造厂 (Gas Cylinder Manu.): 山东华宸高压容器集团德州有限公司/Shangdong Huachen High Pressure Vessle Group Dezhou Co.,Ltd

报告号 Report No.: BGBPDKd4067- DKd4068

气瓶规格 Product Model	WGII232-50-200A	报告编号 Report No	BGBP-DKd4067-DKd4068
气瓶类型 Cylinder Type	concave base	制造标准 Standard	EN ISO9809-1: 2019
气瓶编号 Cylinder No.	DKd4067-2- DKd4068-2	试验日期 Test date	2025-06-05
气瓶材质 Material	34CrMo4	移植号 Transplant number	164
热处理工艺 Heat Process	Q+T	试验温度 Water TEMP.(℃)	24
公称压力 Normal Pre. (bar)	200	水压压力 Hydraulic TP(bar)	300
公称容积 Normal Vol. (L)	50	实测容积 Act. Vol.(L)	50.2
设计重量 DesignWeight(Kg)	51.6	实测瓶重 Real Weight(Kg)	52.2
设计壁厚 DesignThick(mm)	5.2	最小壁厚 Real min Thick(mm)	5.6
破口形状 Break Shape	meet the EN ISO9809-1: 2019 requirement	破口特征 Break Feature	plastic fracture
DKd4067-2	爆破压力 burst pre.(bar)	589.7	
	屈服压力 Yield pre.(bar)	544.3	
DKd4068-2	爆破压力 burst pre.(bar)	587.7	
	屈服压力 Yield pre.(bar)	543.4	

异常现象说明 (Anomaly Description):

No abnormalities

试验结果分析 (Result analysis):

1.The cylinder remained in one piece and had no fragment, the main fracture was plastic fracture in the cylindrical portion, qualified.

2.Longitudinal without branching, qualified.

Identification result:

Meet the EN ISO9809-1:2019 requirement

试验结论 (Test Conclusion):

Qualified

检验员(Tested By): 王玉昭 审核(Checked By): 李敦

文件编号 Document NO.: Q/HCGY. 检-JL10



无缝气瓶水压检验报告及气瓶清单

Hydraulic pressure inspection report of seamless gas cylinders and cylinder list

报告号 (Report No.) SY DKd4067~DKd4068

Batch No.: DKd4067~DKd4068

批号

Serial No DKd4067001 to DKd4068050 inclusive

编号从

到

止

Volume 50L

容积

Outside Diameter: Φ 232 mm

外径

Holding Time: 30

保压时间

s

试验标准: EN ISO 9809-1:2019

秒

Test standard

Quantity tested: 250

试验数量

Pieces

只

Test Pressure: 300

试验压力

BAR(water)

(水压)

Test date: 2023.06.06

试验日期

Results

结果

See the water pressure record for the list of gas cylinders

气瓶清单具体见水压记录

(Signature)

签章

Shandong Huachen High Pressure Vessel Group DeZhou Co.,Ltd

山东华宸高压容器集团德州有限公司

陈生杰