

钢质无缝气瓶批量检验质量证明书

编号: PJZS-2110012

钢瓶名称 钢质无缝气瓶 生产批号 21415
 盛装介质 IG541 生产日期 2021 年 10 月
 图号 CX05-2106 底部结构 凹形底
 制造许可证编号 TS2210N75-2022
 本批钢瓶共 200 只, 编号从 21415001 号到 21415202 号

注: 本批合格钢瓶中不包括下列瓶号:
 21415196 (力学性能) 21415189 (爆破)

1. 主要技术数据

公称容积 90 L 公称工作压力 17.2 MPa
 公称直径 279 mm 水压试验压力 25.8 MPa
 设计最小壁厚 5.5 mm 气密性试验压力 17.2 MPa

2. 主体材料化学成份 (%)

| 材料编号 | 牌号 | C | Mn | Si | S | P | Ni | Cr | S+P | Cu |
|-----------|---------|-----------|-----------|-------|--------|--------|-------|-----------|--------|-------|
| Wh1021728 | 34CrMo4 | 0.35 | 0.81 | 0.26 | 0.003 | 0.01 | 0.036 | 1.1 | 0.013 | 0.015 |
| 国家标准规定值 | | 0.30-0.37 | 0.60-0.90 | ≤0.40 | ≤0.020 | ≤0.020 | ≤0.30 | 0.90-1.20 | ≤0.030 | ≤0.20 |

3. 热处理方法:

调质 热处理

4. 机械性能试验:

屈服强度保证值 $Re \geq 750$ MPa 抗拉强度保证值 $Rg \geq 890$ 且 ≤ 1100 MPa

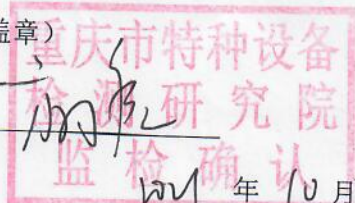
| 试验瓶号 | Re/MPa | Rm/MPa | A/% | $a_k / (J/cm^2)$ |
|------------|--------|--------|------|------------------|
| 21415196-1 | 887 | 966 | 18.0 | 52.3 |
| 21415196-2 | 897 | 1000 | 21.0 | |

6. 底中心解剖检查: 无缩孔、气泡、未熔合、裂纹、夹层等缺陷, 结构形状尺寸符合图样要求。

7. 爆破试验: 瓶号 21415189 实测屈服压力 42.3 MPa 实测爆破压力 48.7 MPa。爆破口塑性断裂, 无碎片, 破口形状符合标准要求。

该批产品经检查和试验符合GB/T 5099.1-2017的要求, 是合格产品。

监督检验单位 (盖章)



监督检验员

2021 年 10 月 22 日

制造单位 (检验专用章)

检验负责人

(Handwritten Signature)

2021 年 10 月 22 日



特种设备(制造)监督检验证书

(气瓶)

编号: QT14-20210463

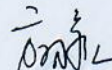
| | | | |
|---------|------------------|------|---------------------|
| 制造单位名称 | 浙江昌兴科技有限公司 | | |
| 制造许可证编号 | TS2210N75-2022 | | |
| 产品名称 | 钢质无缝气瓶 | 产品型号 | WG II 279-90-17. 2A |
| 产品批号 | 21415 | 产品数量 | 200 |
| 产品标准 | GB/T 5099.1-2017 | | |
| 设计单位名称 | 浙江昌兴科技有限公司 | 产品图号 | CX05-2106 |
| 设计日期 | 2021年05月20日 | 制造日期 | 2021年10月22日 |


按照《特种设备安全监察条例》的规定,该批气瓶产品经我机构实施制造监督检验,安全性能符合《气瓶安全技术规程》(TSG23-2021)的要求,特发此证书,并且在该批气瓶产品部位标注有如下监督检验标志。



监督检验所抽的产品编号: 21415189、21415196

本证书适用的产品编号: 21415001—21415202 (本批产品编号中不包括: 21415189、21415196)

监督检验人员:  日期: 2021年10月30日

审核:  日期: 2021年10月30日

批准:  日期: 2021年10月30日

监督检验机构: 重庆市特种设备检测研究院

(监督检验机构检验专用章)

2021年10月30日

监督检验机构核准证号: TS7110275-2023

注: 本证书一式三份,一份监督检验机构存档,两份送制造单位,其中一份由制造单位随产品出厂资料交付。



钢印内容

IG541 21XXXXXX TP25.8 WP17.2 WXX.X V90 S5.5

CX 2021/10 TS2210N75 GB/T 5099.1 20Y (TS)

气瓶使用说明

- 1、 气瓶使用、保管、运输、检验必须符合《气瓶安全监察规程》的规定。
- 2、 充装混合气体的气瓶应当采用加温、抽真空等适当方式进行预处理；气体充装前，应当根据混合气体的每一气体组分性质，确定各种气体组分的充装顺序；在充入每一气体组分之前，应用待充气体对充装配制系统管道进行置换；
- 3、 气瓶不得靠近热源，不得受日光曝晒，与明火距离一般应该不小于10米，气瓶不得撞击。
- 4、 气瓶阀门冻结时，严禁用火烘烤。
- 5、 气瓶的瓶嘴严禁沾有油脂。
- 6、 气瓶内的气体不能全部用尽，应保留不少于0.05MPa的剩余压力。
- 7、 气瓶充气压力不得超过规定压力，严禁超装。
- 8、 盛装惰性气体的气瓶，每五年检验一次；盛装腐蚀性气体的气瓶、潜水气瓶以及常用与海水接触的气瓶，每二年检验一次；盛装其他气体的气瓶，每三年检验一次。
- 9、 在使用过程中如对气瓶安全可靠有怀疑时，应提前进行检验。库存或停用时间超过一个周期的气瓶，启用前应进行检验。

制造许可证编号：TS2210N75-2022

钢质无缝气瓶

合格证

浙江昌兴科技有限公司

地 址：浙江省台州市黄岩区北洋镇康山工业区

电 话：0576-84986888

传 真：0576-84961888

邮政编码：318020

钢瓶主体材料：34CrMo4

化学成分（%）

| | | |
|-----------|-----------|-----------|
| C | Si | Mn |
| 0.30~0.37 | 0.15~0.35 | 0.60~0.90 |
| S | P | P+S |
| ≤0.010 | ≤0.020 | ≤0.025 |

力学性能（调质热处理）：

| 抗拉强度 N/mm ² | 屈服强度 N/mm ² | 延伸率 % | A _k 冲击值 J/cm ² (-50℃) | |
|---------------------------|---------------------------|----------|--|-------------|
| Rm ≥ 890 且 < 1100 | Re ≥ 750 | A ≥ 14 | 最小值 ≥ 28 | 平均值 ≥ 35 |

| | |
|--------------|------|
| 水压试验压力 (MPa) | 25.8 |
| 气密试验压力 (Mpa) | 17.2 |
| 公称工作压力 (Mpa) | 17.2 |
| 筒体设计壁厚 (mm) | 5.5 |

钢瓶规格： WG II 279- V -17.2A

充装介质： _____

钢瓶编号： _____

钢瓶重量： W _____ Kg

水 容 积： V _____ L

本钢瓶的制造符合 GB/T 5099.1-2017 标准的规定，经检验合格。

检验员： _____

检验日期： _____



浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020001 | 21415001 | 85.5 | 175.5 | 25.8 | 90 | 978.7 | 10.8 | 1.1 | 2021/10/20 |
| 211020002 | 21415002 | 86.3 | 176.5 | 25.8 | 90.2 | 966.4 | 20.3 | 2.1 | 2021/10/20 |
| 211020003 | 21415003 | 86.3 | 176.4 | 25.8 | 90.1 | 971.4 | 16.5 | 1.7 | 2021/10/20 |
| 211020004 | 21415004 | 86.3 | 176.5 | 25.8 | 90.2 | 964.3 | 13.5 | 1.4 | 2021/10/20 |
| 211020005 | 21415005 | 86.6 | 176.8 | 25.8 | 90.2 | 976.4 | 15.6 | 1.6 | 2021/10/20 |
| 211020006 | 21415006 | 86.1 | 176.5 | 25.8 | 90.4 | 969.1 | 7.8 | 0.8 | 2021/10/20 |
| 211020007 | 21415007 | 85.9 | 175.9 | 25.8 | 90 | 962.7 | 13.5 | 1.4 | 2021/10/20 |
| 211020008 | 21415008 | 85.8 | 175.9 | 25.8 | 90.1 | 966.6 | 16.4 | 1.7 | 2021/10/20 |
| 211020009 | 21415009 | 85.7 | 175.9 | 25.8 | 90.2 | 974.3 | 14.6 | 1.5 | 2021/10/20 |
| 211020010 | 21415010 | 86.1 | 176.5 | 25.8 | 90.4 | 981.8 | 8.8 | 0.9 | 2021/10/20 |
| 211020011 | 21415011 | 86.1 | 176.4 | 25.8 | 90.3 | 980.4 | 13.7 | 1.4 | 2021/10/20 |
| 211020012 | 21415012 | 86.3 | 176.5 | 25.8 | 90.2 | 974.4 | 17.5 | 1.8 | 2021/10/20 |
| 211020013 | 21415013 | 85.8 | 176.1 | 25.8 | 90.3 | 981.7 | 9.8 | 1 | 2021/10/20 |
| 211020014 | 21415014 | 86.2 | 176.6 | 25.8 | 90.4 | 965.4 | 13.5 | 1.4 | 2021/10/20 |
| 211020015 | 21415015 | 85.9 | 176 | 25.8 | 90.1 | 963.5 | 12.5 | 1.3 | 2021/10/20 |
| 211020016 | 21415016 | 86.2 | 176.5 | 25.8 | 90.3 | 977.1 | 15.6 | 1.6 | 2021/10/20 |
| 211020017 | 21415017 | 85.7 | 176 | 25.8 | 90.3 | 972.8 | 20.4 | 2.1 | 2021/10/20 |
| 211020018 | 21415018 | 85.9 | 176.2 | 25.8 | 90.3 | 976.8 | 13.7 | 1.4 | 2021/10/20 |
| 211020019 | 21415019 | 86.6 | 176.9 | 25.8 | 90.3 | 960.9 | 17.3 | 1.8 | 2021/10/20 |
| 211020020 | 21415020 | 85.8 | 175.9 | 25.8 | 90.1 | 974.1 | 10.7 | 1.1 | 2021/10/20 |
| 211020021 | 21415021 | 85.5 | 175.7 | 25.8 | 90.2 | 980.4 | 11.8 | 1.2 | 2021/10/20 |
| 211020022 | 21415022 | 86.5 | 176.9 | 25.8 | 90.4 | 964.8 | 16.4 | 1.7 | 2021/10/20 |
| 211020023 | 21415023 | 86.3 | 176.5 | 25.8 | 90.2 | 974 | 20.5 | 2.1 | 2021/10/20 |
| 211020024 | 21415024 | 86.6 | 176.8 | 25.8 | 90.2 | 968.6 | 9.7 | 1 | 2021/10/20 |
| 211020025 | 21415025 | 86.5 | 176.8 | 25.8 | 90.3 | 973.6 | 11.7 | 1.2 | 2021/10/20 |
| 211020026 | 21415026 | 86.1 | 176.4 | 25.8 | 90.3 | 973.1 | 12.7 | 1.3 | 2021/10/20 |
| 211020027 | 21415027 | 86.7 | 176.9 | 25.8 | 90.2 | 965.3 | 12.5 | 1.3 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020028 | 21415028 | 86.5 | 176.8 | 25.8 | 90.3 | 981 | 16.7 | 1.7 | 2021/10/20 |
| 211020029 | 21415029 | 86 | 176.1 | 25.8 | 90.1 | 967.8 | 20.3 | 2.1 | 2021/10/20 |
| 211020030 | 21415030 | 86 | 176.1 | 25.8 | 90.1 | 975.4 | 9.8 | 1 | 2021/10/20 |
| 211020031 | 21415031 | 85.5 | 175.5 | 25.8 | 90 | 981.6 | 20.6 | 2.1 | 2021/10/20 |
| 211020032 | 21415032 | 86.4 | 176.6 | 25.8 | 90.2 | 969 | 7.8 | 0.8 | 2021/10/20 |
| 211020033 | 21415033 | 86 | 176.3 | 25.8 | 90.3 | 963.3 | 16.4 | 1.7 | 2021/10/20 |
| 211020034 | 21415034 | 86.2 | 176.5 | 25.8 | 90.3 | 975.2 | 12.7 | 1.3 | 2021/10/20 |
| 211020035 | 21415035 | 86 | 176.3 | 25.8 | 90.3 | 966.5 | 12.6 | 1.3 | 2021/10/20 |
| 211020036 | 21415036 | 86.2 | 176.4 | 25.8 | 90.2 | 979.5 | 6.9 | 0.7 | 2021/10/20 |
| 211020037 | 21415037 | 85.7 | 176 | 25.8 | 90.3 | 977.4 | 10.8 | 1.1 | 2021/10/20 |
| 211020038 | 21415038 | 86 | 176.2 | 25.8 | 90.2 | 980.7 | 8.8 | 0.9 | 2021/10/20 |
| 211020039 | 21415039 | 86.4 | 176.8 | 25.8 | 90.4 | 975.5 | 11.7 | 1.2 | 2021/10/20 |
| 211020040 | 21415040 | 85.7 | 176 | 25.8 | 90.3 | 963.8 | 7.7 | 0.8 | 2021/10/20 |
| 211020041 | 21415041 | 86 | 176 | 25.8 | 90 | 965.3 | 7.7 | 0.8 | 2021/10/20 |
| 211020042 | 21415042 | 86.5 | 176.8 | 25.8 | 90.3 | 980.9 | 21.6 | 2.2 | 2021/10/20 |
| 211020043 | 21415043 | 86.2 | 176.3 | 25.8 | 90.1 | 965.7 | 15.5 | 1.6 | 2021/10/20 |
| 211020044 | 21415044 | 85.5 | 175.6 | 25.8 | 90.1 | 977.4 | 12.7 | 1.3 | 2021/10/20 |
| 211020045 | 21415045 | 86.1 | 176.3 | 25.8 | 90.2 | 970.9 | 13.6 | 1.4 | 2021/10/20 |
| 211020046 | 21415046 | 86.6 | 176.7 | 25.8 | 90.1 | 961.5 | 21.2 | 2.2 | 2021/10/20 |
| 211020047 | 21415047 | 86.6 | 176.7 | 25.8 | 90.1 | 973.1 | 18.5 | 1.9 | 2021/10/20 |
| 211020048 | 21415048 | 86.5 | 176.6 | 25.8 | 90.1 | 966.4 | 20.3 | 2.1 | 2021/10/20 |
| 211020049 | 21415049 | 86.5 | 176.8 | 25.8 | 90.3 | 981.2 | 7.8 | 0.8 | 2021/10/20 |
| 211020050 | 21415050 | 85.8 | 176.1 | 25.8 | 90.3 | 967.2 | 6.8 | 0.7 | 2021/10/20 |
| 211020051 | 21415051 | 86.7 | 177 | 25.8 | 90.3 | 975.4 | 11.7 | 1.2 | 2021/10/20 |
| 211020052 | 21415052 | 85.5 | 175.5 | 25.8 | 90 | 964 | 6.7 | 0.7 | 2021/10/20 |
| 211020053 | 21415053 | 86.2 | 176.5 | 25.8 | 90.3 | 964 | 17.4 | 1.8 | 2021/10/20 |
| 211020054 | 21415054 | 86.4 | 176.8 | 25.8 | 90.4 | 970.5 | 16.5 | 1.7 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020055 | 21415055 | 86.2 | 176.4 | 25.8 | 90.2 | 960.7 | 10.6 | 1.1 | 2021/10/20 |
| 211020056 | 21415056 | 86.2 | 176.2 | 25.8 | 90 | 980.9 | 12.8 | 1.3 | 2021/10/20 |
| 211020057 | 21415057 | 86.5 | 176.7 | 25.8 | 90.2 | 981.8 | 13.7 | 1.4 | 2021/10/20 |
| 211020058 | 21415058 | 85.7 | 176 | 25.8 | 90.3 | 979 | 15.7 | 1.6 | 2021/10/20 |
| 211020059 | 21415059 | 85.8 | 176 | 25.8 | 90.2 | 976.5 | 20.5 | 2.1 | 2021/10/20 |
| 211020060 | 21415060 | 86.5 | 176.6 | 25.8 | 90.1 | 969.2 | 14.5 | 1.5 | 2021/10/20 |
| 211020061 | 21415061 | 85.7 | 175.8 | 25.8 | 90.1 | 965.3 | 8.7 | 0.9 | 2021/10/20 |
| 211020062 | 21415062 | 86.3 | 176.5 | 25.8 | 90.2 | 969.2 | 20.4 | 2.1 | 2021/10/20 |
| 211020063 | 21415063 | 86 | 176.1 | 25.8 | 90.1 | 974.9 | 18.5 | 1.9 | 2021/10/20 |
| 211020064 | 21415064 | 85.7 | 175.9 | 25.8 | 90.2 | 979.6 | 10.8 | 1.1 | 2021/10/20 |
| 211020065 | 21415065 | 86.2 | 176.4 | 25.8 | 90.2 | 967.4 | 8.7 | 0.9 | 2021/10/20 |
| 211020066 | 21415066 | 86.3 | 176.6 | 25.8 | 90.3 | 969 | 12.6 | 1.3 | 2021/10/20 |
| 211020067 | 21415067 | 85.8 | 176.2 | 25.8 | 90.4 | 967.1 | 13.5 | 1.4 | 2021/10/20 |
| 211020068 | 21415068 | 85.8 | 175.9 | 25.8 | 90.1 | 964.9 | 12.5 | 1.3 | 2021/10/20 |
| 211020069 | 21415069 | 85.6 | 175.6 | 25.8 | 90 | 962.5 | 10.6 | 1.1 | 2021/10/20 |
| 211020070 | 21415070 | 85.6 | 175.8 | 25.8 | 90.2 | 975.6 | 14.6 | 1.5 | 2021/10/20 |
| 211020071 | 21415071 | 86.4 | 176.5 | 25.8 | 90.1 | 976.5 | 22.5 | 2.3 | 2021/10/20 |
| 211020072 | 21415072 | 86.3 | 176.6 | 25.8 | 90.3 | 962.1 | 17.3 | 1.8 | 2021/10/20 |
| 211020073 | 21415073 | 86.4 | 176.7 | 25.8 | 90.3 | 967.6 | 20.3 | 2.1 | 2021/10/20 |
| 211020074 | 21415074 | 86.1 | 176.1 | 25.8 | 90 | 976 | 14.6 | 1.5 | 2021/10/20 |
| 211020075 | 21415075 | 86 | 176.4 | 25.8 | 90.4 | 978.1 | 15.6 | 1.6 | 2021/10/20 |
| 211020076 | 21415076 | 86.1 | 176.3 | 25.8 | 90.2 | 963.8 | 19.3 | 2 | 2021/10/20 |
| 211020077 | 21415077 | 86.2 | 176.6 | 25.8 | 90.4 | 963.8 | 15.4 | 1.6 | 2021/10/20 |
| 211020078 | 21415078 | 85.8 | 176 | 25.8 | 90.2 | 968.3 | 13.6 | 1.4 | 2021/10/20 |
| 211020079 | 21415079 | 85.9 | 176 | 25.8 | 90.1 | 961 | 15.4 | 1.6 | 2021/10/20 |
| 211020080 | 21415080 | 86.1 | 176.4 | 25.8 | 90.3 | 974.1 | 21.4 | 2.2 | 2021/10/20 |
| 211020081 | 21415081 | 85.6 | 175.8 | 25.8 | 90.2 | 963 | 22.1 | 2.3 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020082 | 21415082 | 85.5 | 175.6 | 25.8 | 90.1 | 970.9 | 15.5 | 1.6 | 2021/10/20 |
| 211020083 | 21415083 | 86.4 | 176.6 | 25.8 | 90.2 | 965.6 | 21.2 | 2.2 | 2021/10/20 |
| 211020084 | 21415084 | 85.8 | 176.1 | 25.8 | 90.3 | 964.9 | 12.5 | 1.3 | 2021/10/20 |
| 211020085 | 21415085 | 85.7 | 175.9 | 25.8 | 90.2 | 962.4 | 16.4 | 1.7 | 2021/10/20 |
| 211020086 | 21415086 | 85.7 | 175.7 | 25.8 | 90 | 969.9 | 14.5 | 1.5 | 2021/10/20 |
| 211020087 | 21415087 | 86.2 | 176.6 | 25.8 | 90.4 | 976 | 19.5 | 2 | 2021/10/20 |
| 211020088 | 21415088 | 86.6 | 176.7 | 25.8 | 90.1 | 965.3 | 7.7 | 0.8 | 2021/10/20 |
| 211020089 | 21415089 | 86.1 | 176.4 | 25.8 | 90.3 | 980.8 | 16.7 | 1.7 | 2021/10/20 |
| 211020090 | 21415090 | 86.2 | 176.3 | 25.8 | 90.1 | 977.9 | 17.6 | 1.8 | 2021/10/20 |
| 211020091 | 21415091 | 85.7 | 175.7 | 25.8 | 90 | 981.9 | 8.8 | 0.9 | 2021/10/20 |
| 211020092 | 21415092 | 85.6 | 175.8 | 25.8 | 90.2 | 968 | 6.8 | 0.7 | 2021/10/20 |
| 211020093 | 21415093 | 86.7 | 176.8 | 25.8 | 90.1 | 966.9 | 17.4 | 1.8 | 2021/10/20 |
| 211020094 | 21415094 | 85.8 | 176.1 | 25.8 | 90.3 | 972.5 | 8.8 | 0.9 | 2021/10/20 |
| 211020095 | 21415095 | 85.5 | 175.8 | 25.8 | 90.3 | 967 | 20.3 | 2.1 | 2021/10/20 |
| 211020096 | 21415096 | 86.1 | 176.4 | 25.8 | 90.3 | 960.3 | 13.4 | 1.4 | 2021/10/20 |
| 211020097 | 21415097 | 86.2 | 176.5 | 25.8 | 90.3 | 976.9 | 8.8 | 0.9 | 2021/10/20 |
| 211020098 | 21415098 | 85.7 | 175.9 | 25.8 | 90.2 | 979.8 | 13.7 | 1.4 | 2021/10/20 |
| 211020099 | 21415099 | 86.1 | 176.5 | 25.8 | 90.4 | 979.3 | 17.6 | 1.8 | 2021/10/20 |
| 211020100 | 21415100 | 86.7 | 176.7 | 25.8 | 90 | 972 | 8.7 | 0.9 | 2021/10/20 |
| 211020101 | 21415101 | 85.7 | 176 | 25.8 | 90.3 | 964.9 | 8.7 | 0.9 | 2021/10/20 |
| 211020102 | 21415102 | 86.6 | 176.9 | 25.8 | 90.3 | 965 | 9.7 | 1 | 2021/10/20 |
| 211020103 | 21415103 | 86.4 | 176.7 | 25.8 | 90.3 | 980.5 | 19.6 | 2 | 2021/10/20 |
| 211020104 | 21415104 | 86.3 | 176.4 | 25.8 | 90.1 | 980.3 | 10.8 | 1.1 | 2021/10/20 |
| 211020105 | 21415105 | 86 | 176 | 25.8 | 90 | 980.6 | 17.7 | 1.8 | 2021/10/20 |
| 211020106 | 21415106 | 86.3 | 176.3 | 25.8 | 90 | 961.6 | 12.5 | 1.3 | 2021/10/20 |
| 211020107 | 21415107 | 85.6 | 175.9 | 25.8 | 90.3 | 980.4 | 8.8 | 0.9 | 2021/10/20 |
| 211020108 | 21415108 | 86.3 | 176.5 | 25.8 | 90.2 | 972.8 | 20.4 | 2.1 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020109 | 21415109 | 86.5 | 176.6 | 25.8 | 90.1 | 969.7 | 14.5 | 1.5 | 2021/10/20 |
| 211020110 | 21415110 | 86.1 | 176.4 | 25.8 | 90.3 | 968.4 | 14.5 | 1.5 | 2021/10/20 |
| 211020111 | 21415111 | 85.7 | 175.9 | 25.8 | 90.2 | 969.5 | 6.8 | 0.7 | 2021/10/20 |
| 211020112 | 21415112 | 86 | 176.4 | 25.8 | 90.4 | 971.5 | 16.5 | 1.7 | 2021/10/20 |
| 211020113 | 21415113 | 85.8 | 176.1 | 25.8 | 90.3 | 967.5 | 19.4 | 2 | 2021/10/20 |
| 211020114 | 21415114 | 86.4 | 176.5 | 25.8 | 90.1 | 964.2 | 20.2 | 2.1 | 2021/10/20 |
| 211020115 | 21415115 | 86.6 | 176.6 | 25.8 | 90 | 960.8 | 10.6 | 1.1 | 2021/10/20 |
| 211020116 | 21415116 | 86.6 | 176.8 | 25.8 | 90.2 | 977.6 | 17.6 | 1.8 | 2021/10/20 |
| 211020117 | 21415117 | 86.6 | 176.7 | 25.8 | 90.1 | 976.4 | 13.7 | 1.4 | 2021/10/20 |
| 211020118 | 21415118 | 85.7 | 176 | 25.8 | 90.3 | 971.7 | 18.5 | 1.9 | 2021/10/20 |
| 211020119 | 21415119 | 85.5 | 175.9 | 25.8 | 90.4 | 980.3 | 11.8 | 1.2 | 2021/10/20 |
| 211020120 | 21415120 | 85.8 | 176.1 | 25.8 | 90.3 | 978.6 | 16.6 | 1.7 | 2021/10/20 |
| 211020121 | 21415121 | 86 | 176 | 25.8 | 90 | 973.9 | 7.8 | 0.8 | 2021/10/20 |
| 211020122 | 21415122 | 86 | 176.4 | 25.8 | 90.4 | 968.5 | 21.3 | 2.2 | 2021/10/20 |
| 211020123 | 21415123 | 86 | 176.1 | 25.8 | 90.1 | 961.7 | 13.5 | 1.4 | 2021/10/20 |
| 211020124 | 21415124 | 85.8 | 176.2 | 25.8 | 90.4 | 964.3 | 18.3 | 1.9 | 2021/10/20 |
| 211020125 | 21415125 | 86.4 | 176.5 | 25.8 | 90.1 | 970.8 | 10.7 | 1.1 | 2021/10/20 |
| 211020126 | 21415126 | 85.8 | 176.1 | 25.8 | 90.3 | 978.8 | 9.8 | 1 | 2021/10/20 |
| 211020127 | 21415127 | 86.3 | 176.6 | 25.8 | 90.3 | 973 | 22.4 | 2.3 | 2021/10/20 |
| 211020128 | 21415128 | 85.5 | 175.5 | 25.8 | 90 | 977.9 | 14.7 | 1.5 | 2021/10/20 |
| 211020129 | 21415129 | 86.5 | 176.9 | 25.8 | 90.4 | 972.1 | 14.6 | 1.5 | 2021/10/20 |
| 211020130 | 21415130 | 86.7 | 176.9 | 25.8 | 90.2 | 963.8 | 12.5 | 1.3 | 2021/10/20 |
| 211020131 | 21415131 | 85.6 | 175.8 | 25.8 | 90.2 | 962.8 | 10.6 | 1.1 | 2021/10/20 |
| 211020132 | 21415132 | 86.3 | 176.5 | 25.8 | 90.2 | 967.8 | 18.4 | 1.9 | 2021/10/20 |
| 211020133 | 21415133 | 86 | 176.2 | 25.8 | 90.2 | 970 | 16.5 | 1.7 | 2021/10/20 |
| 211020134 | 21415134 | 86.5 | 176.8 | 25.8 | 90.3 | 973.4 | 16.5 | 1.7 | 2021/10/20 |
| 211020135 | 21415135 | 86.3 | 176.4 | 25.8 | 90.1 | 981.8 | 9.8 | 1 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020136 | 21415136 | 86 | 176 | 25.8 | 90 | 980.7 | 9.8 | 1 | 2021/10/20 |
| 211020137 | 21415137 | 86.3 | 176.3 | 25.8 | 90 | 975.6 | 8.8 | 0.9 | 2021/10/20 |
| 211020138 | 21415138 | 86.5 | 176.8 | 25.8 | 90.3 | 973.6 | 16.6 | 1.7 | 2021/10/20 |
| 211020139 | 21415139 | 86.6 | 176.9 | 25.8 | 90.3 | 969.6 | 8.7 | 0.9 | 2021/10/20 |
| 211020140 | 21415140 | 86.6 | 176.9 | 25.8 | 90.3 | 977.6 | 16.6 | 1.7 | 2021/10/20 |
| 211020141 | 21415141 | 86.5 | 176.8 | 25.8 | 90.3 | 972.5 | 13.6 | 1.4 | 2021/10/20 |
| 211020142 | 21415142 | 86.5 | 176.7 | 25.8 | 90.2 | 970.6 | 14.6 | 1.5 | 2021/10/20 |
| 211020143 | 21415143 | 86.6 | 176.9 | 25.8 | 90.3 | 979.4 | 21.5 | 2.2 | 2021/10/20 |
| 211020144 | 21415144 | 86.5 | 176.6 | 25.8 | 90.1 | 961 | 15.4 | 1.6 | 2021/10/20 |
| 211020145 | 21415145 | 85.7 | 176 | 25.8 | 90.3 | 964.8 | 13.5 | 1.4 | 2021/10/20 |
| 211020146 | 21415146 | 86.6 | 176.9 | 25.8 | 90.3 | 972.9 | 12.6 | 1.3 | 2021/10/20 |
| 211020147 | 21415147 | 86 | 176.3 | 25.8 | 90.3 | 977.3 | 13.7 | 1.4 | 2021/10/20 |
| 211020148 | 21415148 | 85.7 | 176 | 25.8 | 90.3 | 978.4 | 9.8 | 1 | 2021/10/20 |
| 211020149 | 21415149 | 86 | 176.4 | 25.8 | 90.4 | 968.3 | 13.6 | 1.4 | 2021/10/20 |
| 211020150 | 21415150 | 85.7 | 175.8 | 25.8 | 90.1 | 970.3 | 13.6 | 1.4 | 2021/10/20 |
| 211020151 | 21415151 | 85.6 | 175.8 | 25.8 | 90.2 | 980.8 | 9.8 | 1 | 2021/10/20 |
| 211020152 | 21415152 | 86.3 | 176.4 | 25.8 | 90.1 | 974 | 15.6 | 1.6 | 2021/10/20 |
| 211020153 | 21415153 | 86 | 176.3 | 25.8 | 90.3 | 978.4 | 15.7 | 1.6 | 2021/10/20 |
| 211020154 | 21415154 | 86.1 | 176.2 | 25.8 | 90.1 | 965.7 | 15.5 | 1.6 | 2021/10/20 |
| 211020155 | 21415155 | 86.4 | 176.6 | 25.8 | 90.2 | 963.7 | 12.5 | 1.3 | 2021/10/20 |
| 211020156 | 21415156 | 86.7 | 176.7 | 25.8 | 90 | 973.9 | 7.8 | 0.8 | 2021/10/20 |
| 211020157 | 21415157 | 86 | 176 | 25.8 | 90 | 971.8 | 18.5 | 1.9 | 2021/10/20 |
| 211020158 | 21415158 | 85.8 | 176 | 25.8 | 90.2 | 976.6 | 21.5 | 2.2 | 2021/10/20 |
| 211020159 | 21415159 | 85.7 | 175.9 | 25.8 | 90.2 | 975.2 | 8.8 | 0.9 | 2021/10/20 |
| 211020160 | 21415160 | 85.8 | 176 | 25.8 | 90.2 | 971.3 | 21.4 | 2.2 | 2021/10/20 |
| 211020161 | 21415161 | 86.7 | 176.8 | 25.8 | 90.1 | 960.2 | 15.4 | 1.6 | 2021/10/20 |
| 211020162 | 21415162 | 86.1 | 176.4 | 25.8 | 90.3 | 960.1 | 10.6 | 1.1 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 °C (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020163 | 21415163 | 85.6 | 175.7 | 25.8 | 90.1 | 960.4 | 14.4 | 1.5 | 2021/10/20 |
| 211020164 | 21415164 | 86.2 | 176.2 | 25.8 | 90 | 977.8 | 14.7 | 1.5 | 2021/10/20 |
| 211020165 | 21415165 | 86.6 | 176.9 | 25.8 | 90.3 | 977.1 | 21.5 | 2.2 | 2021/10/20 |
| 211020166 | 21415166 | 86.1 | 176.3 | 25.8 | 90.2 | 969.8 | 8.7 | 0.9 | 2021/10/20 |
| 211020167 | 21415167 | 86.2 | 176.3 | 25.8 | 90.1 | 962.1 | 17.3 | 1.8 | 2021/10/20 |
| 211020168 | 21415168 | 85.8 | 176.2 | 25.8 | 90.4 | 981 | 14.7 | 1.5 | 2021/10/20 |
| 211020169 | 21415169 | 86.1 | 176.4 | 25.8 | 90.3 | 960.7 | 16.3 | 1.7 | 2021/10/20 |
| 211020170 | 21415170 | 86.4 | 176.7 | 25.8 | 90.3 | 964.4 | 21.2 | 2.2 | 2021/10/20 |
| 211020171 | 21415171 | 85.5 | 175.8 | 25.8 | 90.3 | 966.4 | 13.5 | 1.4 | 2021/10/20 |
| 211020172 | 21415172 | 85.8 | 176.1 | 25.8 | 90.3 | 981 | 20.6 | 2.1 | 2021/10/20 |
| 211020173 | 21415173 | 86.7 | 176.9 | 25.8 | 90.2 | 973.5 | 18.5 | 1.9 | 2021/10/20 |
| 211020174 | 21415174 | 85.7 | 175.8 | 25.8 | 90.1 | 973.3 | 19.5 | 2 | 2021/10/20 |
| 211020175 | 21415175 | 86.5 | 176.7 | 25.8 | 90.2 | 980.4 | 8.8 | 0.9 | 2021/10/20 |
| 211020176 | 21415176 | 86.2 | 176.3 | 25.8 | 90.1 | 967 | 15.5 | 1.6 | 2021/10/20 |
| 211020177 | 21415177 | 85.5 | 175.7 | 25.8 | 90.2 | 975.8 | 13.7 | 1.4 | 2021/10/20 |
| 211020178 | 21415178 | 86.7 | 177 | 25.8 | 90.3 | 974.9 | 15.6 | 1.6 | 2021/10/20 |
| 211020179 | 21415179 | 85.5 | 175.8 | 25.8 | 90.3 | 976.9 | 19.5 | 2 | 2021/10/20 |
| 211020180 | 21415180 | 86.5 | 176.6 | 25.8 | 90.1 | 979.9 | 10.8 | 1.1 | 2021/10/20 |
| 211020181 | 21415181 | 86.5 | 176.7 | 25.8 | 90.2 | 969.7 | 9.7 | 1 | 2021/10/20 |
| 211020182 | 21415182 | 86 | 176.3 | 25.8 | 90.3 | 968.1 | 6.8 | 0.7 | 2021/10/20 |
| 211020183 | 21415183 | 85.9 | 176.1 | 25.8 | 90.2 | 960.1 | 14.4 | 1.5 | 2021/10/20 |
| 211020184 | 21415184 | 86.2 | 176.3 | 25.8 | 90.1 | 961.4 | 14.4 | 1.5 | 2021/10/20 |
| 211020185 | 21415185 | 86.6 | 177 | 25.8 | 90.4 | 978.4 | 21.5 | 2.2 | 2021/10/20 |
| 211020186 | 21415186 | 86.7 | 176.7 | 25.8 | 90 | 964.1 | 9.6 | 1 | 2021/10/20 |
| 211020187 | 21415187 | 86.5 | 176.7 | 25.8 | 90.2 | 962.5 | 14.4 | 1.5 | 2021/10/20 |
| 211020188 | 21415188 | 86.2 | 176.5 | 25.8 | 90.3 | 970.2 | 10.7 | 1.1 | 2021/10/20 |
| 211020189 | 21415189 | 85.8 | 176.1 | 25.8 | 90.3 | 974.5 | 14.6 | 1.5 | 2021/10/20 |

检验员 (Inspector): 林文君

试压者 (Test person): 王切有

浙江昌兴科技有限公司

水压试验记录 (Hydrostatic Test Record)

| 产品名称 Name | 钢质无缝气瓶 | 生产批号 Batch No. | 21415 | 水温 ℃ (° F) Water Temp. | 18 | 保压时间The holding time | 30S | 材质 Material | 37Mn |
|--------------------------|------------------|--|--|---------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------|
| 检验号 Inspection No. | 出厂编号 Manu No. | 空瓶重 [Kg(lb)] Emp. Cyl. Weight | 瓶和水重 [Kg(lb)] Cyl. Weigh twith Water | 试验压力 [MPa(psi)]]Test Press. | 容积 [L(cu. in)] Water Capa. | 全膨胀量 [ml(cu. in)] Expansion. | 永久膨胀量 [ml(cu. in)] Per. Expan | 变形率 [%]Per. Expan. Ratio | 日期 Date |
| 211020190 | 21415190 | 85.6 | 175.7 | 25.8 | 90.1 | 972.8 | 15.6 | 1.6 | 2021/10/20 |
| 211020191 | 21415191 | 85.8 | 176 | 25.8 | 90.2 | 963.6 | 8.7 | 0.9 | 2021/10/20 |
| 211020192 | 21415192 | 86 | 176.3 | 25.8 | 90.3 | 980 | 14.7 | 1.5 | 2021/10/20 |
| 211020193 | 21415193 | 86.1 | 176.1 | 25.8 | 90 | 972.1 | 6.8 | 0.7 | 2021/10/20 |
| 211020194 | 21415194 | 85.6 | 175.6 | 25.8 | 90 | 970.6 | 10.7 | 1.1 | 2021/10/20 |
| 211020195 | 21415195 | 85.6 | 175.9 | 25.8 | 90.3 | 973.7 | 20.4 | 2.1 | 2021/10/20 |
| 211020196 | 21415197 | 86.3 | 176.3 | 25.8 | 90 | 970.3 | 12.6 | 1.3 | 2021/10/20 |
| 211020197 | 21415198 | 85.8 | 176 | 25.8 | 90.2 | 967.4 | 22.3 | 2.3 | 2021/10/20 |
| 211020198 | 21415199 | 85.8 | 176 | 25.8 | 90.2 | 974.7 | 16.6 | 1.7 | 2021/10/20 |
| 211020199 | 21415200 | 86 | 176.4 | 25.8 | 90.4 | 968.9 | 17.4 | 1.8 | 2021/10/20 |
| 211020200 | 21415201 | 86.5 | 176.8 | 25.8 | 90.3 | 976.2 | 14.6 | 1.5 | 2021/10/20 |
| 211020201 | 21415202 | 85.9 | 176 | 25.8 | 90.1 | 963.4 | 18.3 | 1.9 | 2021/10/20 |
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检验员 (Inspector): 林文君

试压者 (Test person): 王切有