


ACCEPTANCE CERTIFICATE FOR WELDED STEEL GAS CYLINDERS: LPG CYLINDER

Batch 2020-T04-01~ 2020-T04-21 comprising of 21000 cylinders, has been inspected & tested according to ISO 22991-2004.


Customer serial numbers: 041001 (Inclusive) to 062000 (Inclusive) for 6KG-14.5L LPG cylinder in HANGZHOU YUHANG ZHANGSHAN STEEL CYLINDER CO. LTD.

Details please see the inserted records.

Manufacturers Particulars & Markings:

Manufacturer's Name: <u>HANGZHOU YUHANG ZHANGSHAN STEEL CYLINDER CO. LTD.</u>	
Manufacturer's Address: <u>RENHE INDUSTRIAL ZONE YUHANG HANGZHOU, ZHEJIANG PROVINCE</u>	

Owner / Customers Particulars:

Owner's / Customers' Name: <u>TAIFA GAS TANZANIA LIMITED</u>	
Owner's / Customers' Address: <u>GOLDEN JUBILEE TOWER 1 5TH FLOOR W/DAR ES SALAAM TANZANIA</u>	

Note: LC Number: 021ILCI202530001;

Cylinders Technical Data:

Minimum Water Capacity: 14.5 L Overall Cylinder length: 271~273 mm
Maximum Water Capacity: 14.9 L
Nominal outer Diameter: Φ 300 mm (as per design drawing No. XZ014L5-0001, 2020-01-09)

Test Pressure: 30 bar (pressure hold time was Min. 30 seconds for all cylinders)

Minimum Thickness of Domed End: 2.23 mm

Minimum Wall Thickness of Cylinder Shell: 2.45 mm

Construction Materials:

Foot rings or Shrouds:						
Supplier: ANGANG STEEL COMPANY LIMITED						
Material Grade, Standard: GB/T 700 Q235B						
Certificate No: B591207200						
Values % of Chemical Composition:						
Heat No.	C	Mn	Si	S	P	Al
19LD8357	0.17	0.25	0.098	0.010	0.020	0.029
19ND7469	0.19	0.25	0.078	0.011	0.021	0.026

Boss:						
Supplier: QUZHOU YUANLI METAL PRODUCTS CO. LTD						
Material Grade, Standard: GB/T 700 Q235B						
Certificate No: 2005060242						

Values % of Chemical Composition:

Heat No.	C	Mn	Si	S	P	Al
2-41592	0.14	0.35	0.15	0.006	0.020	0.004
2-41593	0.15	0.36	0.17	0.011	0.022	0.004

Upper and bottom shell:

Supplier: ANGANG STEEL COMPANY LIMITED

Material Grade, Standard: JIS G3116 SG295

Certificate No: B500706913, B500706914, B500706899

Values % of Chemical Composition:

Heat No.	C	P	S	Si	Mn	Al
20MD4648	0.15	0.016	0.001	0.080	0.92	0.029
	0.15	0.014	0.003	0.086	0.91	0.039

Heat Treatment:

Normalized

Temperature: 890~930 °C

Holding time: 300 seconds (See inserted heat treatment test record)

Acceptance Tests:

1. Cylinder design Review

Design calculation for XZ014L5-0001, Date: 2020-01-09;

2. Certified cylinder drawing

XZ014L5-0001, Date: 2020-01-09;

3. Bursts test

Test Medium: (Water)		The minimum requirement of burst pressure: 67.5 bar				
Selected Number	Serial Number Range	Mass of empty cylinder (Kg)	Water Capacity (L)	Burst pressure (Mpa)	Volumetric Expansion (%)	Result
041374	041001~042000	9.40	14.70	12.18	18.45	Acceptable
042364	042001~043000	9.30	14.55	11.62	18.52	Acceptable
043844	043001~044000	9.35	14.50	11.74	18.29	Acceptable
044644	044001~045000	9.35	14.60	11.64	18.47	Acceptable
045451	045001~046000	9.35	14.60	11.75	20.77	Acceptable
046152	046001~047000	9.35	14.60	11.93	18.08	Acceptable
047450	047001~048000	9.30	14.60	11.81	18.36	Acceptable
048659	048001~049000	9.35	14.65	12.12	22.67	Acceptable
049011	049001~050000	9.40	14.70	11.93	18.56	Acceptable
050490	050001~051000	9.35	14.60	12.42	18.72	Acceptable
051758	051001~052000	9.35	14.60	11.55	17.66	Acceptable
052105	052001~053000	9.30	14.55	11.74	18.61	Acceptable
053286	053001~054000	9.35	14.60	11.49	17.41	Acceptable
054475	054001~055000	9.40	14.55	11.66	17.59	Acceptable
055410	055001~056000	9.30	14.65	12.39	21.17	Acceptable
056368	056001~057000	9.35	14.70	12.37	19.80	Acceptable
057251	057001~058000	9.35	14.65	11.97	18.19	Acceptable

058415	058001~059000	9.30	14.55	12.35	17.89	Acceptable
059775	059001~060000	9.30	14.50	11.57	18.92	Acceptable
060702	060001~061000	9.35	14.60	12.01	19.26	Acceptable
061472	061001~062000	9.35	14.65	12.22	20.69	Acceptable

4. Mechanical tests

Selected Number	Serial Number Range	Tensile test on parent metal (N/mm ²)	Yield strength on parent metal (N/mm ²)	Elongation (%)	Tensile strength on weld (N/mm ²)	Bending In weld	Result
041381	041001~042000	503	391	26.5	498	Satisfactory	Acceptable
042620	042001~043000	485	379	26.0	502	Satisfactory	Acceptable
043997	043001~044000	512	397	26.5	506	Satisfactory	Acceptable
044556	044001~045000	507	399	27.0	494	Satisfactory	Acceptable
045182	045001~046000	513	393	28.5	516	Satisfactory	Acceptable
046010	046001~047000	508	395	27.0	502	Satisfactory	Acceptable
047023	047001~048000	517	404	29.0	515	Satisfactory	Acceptable
048081	048001~049000	517	404	28.5	494	Satisfactory	Acceptable
049468	049001~050000	512	398	27.5	514	Satisfactory	Acceptable
050846	050001~051000	513	395	27.0	526	Satisfactory	Acceptable
051966	051001~052000	497	395	26.5	517	Satisfactory	Acceptable
052560	052001~053000	518	409	28.0	505	Satisfactory	Acceptable
053236	053001~054000	496	381	27.5	509	Satisfactory	Acceptable
054244	054001~055000	496	396	28.5	502	Satisfactory	Acceptable
055375	055001~056000	491	380	27.5	510	Satisfactory	Acceptable
056586	056001~057000	509	396	27.0	522	Satisfactory	Acceptable
057038	057001~058000	519	404	28.0	516	Satisfactory	Acceptable
058764	058001~059000	514	388	28.0	497	Satisfactory	Acceptable
059428	059001~060000	480	397	27.5	506	Satisfactory	Acceptable
060583	060001~061000	509	401	28.0	516	Satisfactory	Acceptable
061431	061001~062000	499	378	27.0	494	Satisfactory	Acceptable

5. RT Report

The RT reports for the following welding seam serial numbers were reviewed (RT standard assessment standard as per ISO17636)

The results were viewed with no objections.

The following welding seam serial numbers were reviewed

Serial No.	041685	Serial No.	041319	Serial No.	041742	Serial No.	041764
Serial No.	041728	Serial No.	041734	Serial No.	045513	Serial No.	045592
Serial No.	045182	Serial No.	045839	Serial No.	045921	Serial No.	045451
Serial No.	049653	Serial No.	049468	Serial No.	049011	Serial No.	049288
Serial No.	049286	Serial No.	049527	Serial No.	053286	Serial No.	053295
Serial No.	053368	Serial No.	053788	Serial No.	053078	Serial No.	053742
Serial No.	057033	Serial No.	057251	Serial No.	057177	Serial No.	057463
Serial No.	057627	Serial No.	057261	Serial No.	061288	Serial No.	061242

6. Hydraulic test

Pressure gauge number	Test Pressure (Bar)	Holding Time (S)	Test Temperature (°C)	Test Medium
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XP190512988	30	35	20	Water			
XP190512989	30	35	20	Water			
The cylinders were hydraulic tested by manufacturer and randomly witnessed by SGS inspector. The typical cylinders shown below were witnessed.							
Serial No.	041685	Serial No.	041728	Serial No.	041960	Serial No.	041832
Serial No.	041742	Serial No.	041734	Serial No.	042345	Serial No.	041716
Serial No.	041746	Serial No.	042011	Serial No.	041981	Serial No.	041818
Result	Acceptable						

7. Leakage test

Leakage test

Pressure gauge number	Test Pressure (Bar)	Holding Time (S)	Test Temperature (°C)	Test Medium			
XP190512990	17	60	25	Air			
XP190512991	17	60	25	Air			
The cylinders were leakage tested by manufacturer and randomly witnessed by SGS inspector. The typical cylinders shown below were witnessed.							
Serial No.	041001	Serial No.	041004	Serial No.	041007	Serial No.	041010
Serial No.	041002	Serial No.	041005	Serial No.	041008	Serial No.	041011
Serial No.	041003	Serial No.	041006	Serial No.	041009	Serial No.	041012
Result	Acceptable						

This is to certify that the cylinders have passed the pressure test & other tests and analysis required, and that

They are in accordance with ISO 22991-2004.

Prepared by:	Tyler Sun <i>Tyler Sun</i>	Authorized by:	Sarah Wang <i>Sarah</i>
Title or position:	Senior inspector	Title or position:	Inspection Supervisor
Date:	2020-11-01	Date:	2020-11-01

-----End of Certificate-----

