



**United States of America
Department of Homeland Security
United States Coast Guard**

Certification Date: 19 Jul 2021
Expiration Date: 19 Jul 2022

Temporary Certificate of Inspection

For ships on international voyages this certificate fulfills the requirements of SOLAS 74 as amended, regulation V/14, for a SAFE MANNING DOCUMENT.

This Temporary Certificate of Inspection is issued under the provision of Title 46 United States Code, Section 399, in lieu of the regular certificate of inspection, and shall be in force only until the receipt on board said vessel of the original certificate of inspection, this certificate in no case to be valid after one year from the date of inspection.

Vessel Name	Official Number	IMO Number	Call Sign	Service
USL - 145	583855			Tank Barge

Hailing Port	Hull Material	Horsepower	Propulsion
HOUSTON, TX	Steel		Unknown
UNITED STATES			

Place Built	Delivery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length
DECATUR, ALABAMA	01Jan1977		R-1640	R-1640		R-192.3
UNITED STATES			I-	I-		I-0

Owner	Operator
KIRBY INLAND MARINE, LP 55 WAUGH DRIVE SUITE 1000 HOUSTON, TX 77007 UNITED STATES	KIRBY INLAND MARINE LP 18350 MARKET ST. CHANNELVIEW, TX 77530 UNITED STATES

This vessel must be manned with the following licensed and unlicensed Personnel. Included in which there must be 0 Certified Lifeboatmen, 0 Certified Tankermen, 0 HSC Type Rating, and 0 GMDSS Operators.

0 Masters	0 Licensed Mates	0 Chief Engineers	0 Oilers
0 Chief Mates	0 First Class Pilots	0 First Assistant Engineers	
0 Second Mates	0 Radio Officers	0 Second Assistant Engineers	
0 Third Mates	0 Able Seamen	0 Third Assistant Engineers	
0 Master First Class Pilot	0 Ordinary Seamen	0 Licensed Engineers	
0 Mate First Class Pilots	0 Deckhands	0 Qualified Member Engineer	

In addition, this vessel may carry 0 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total Persons allowed: 0

Route Permitted And Conditions Of Operation:
---Lakes, Bays, and Sounds---

This vessel has been granted a fresh water service examination interval in accordance with 46 CFR 31.10-21(a) (2). If this vessel is operated in salt water more than 6 months in any 12 month period, the vessel must be inspected using salt water intervals per 46 CFR 31.10-21(a) (1), and the cognizant OCMI notified in writing as soon as this change in status occurs.

This tank barge is participating in the Eighth and Ninth Coast Guard District's Tank Barge Streamlined Inspection Program (TBSIP). Inspection activities aboard this barge shall be conducted in accordance with its Tank Barge Action Plan (TAP). Inspection issues concerning this barge should be directed to OCMI Houston-Galveston.

*****SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION*****

With this Inspection for Certification having been completed at Port Arthur, TX, UNITED STATES, the Officer in Charge, Marine Inspection, Marine Safety Unit Port Arthur certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

Annual/Periodic/Re-Inspection				This certificate issued by: KARIMA A. HANTAL, CDR, USCG, By direction Officer in Charge, Marine Inspection Marine Safety Unit Port Arthur Inspection Zone
Date	Zone	A/P/R	Signature	



Temporary Certificate of Inspection

Vessel Name: USL - 145

---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
DryDock	31Jul2031	19Jul2021	09Feb2012
Internal Structure	31Mar2026	19Jul2021	23Mar2016

--- Liquid/Gas/Solid Cargo Authority/Conditions ---

Authorization: LIQUEFIED FLAMMABLE GAS

Total Capacity	Units	Highest Grade Type	Part151 Regulated	Part153 Regulated	Part154 Regulated
14240	Barrels	LFG	Yes	No	No

Hazardous Bulk Solids Authority

Not Authorized

Loading Constraints - Structural

Tank Location Description	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
1	870	7.20
2	870	7.20

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	1740	8ft 6in	7.2	
II	1740	8ft 6in	7.2	

Conditions Of Carriage

Inspected and approved for the carriage of liquefied flammable gas (Propylene Oxide) at a pressure not to exceed 90 PSI and at temperatures not less than ambient.

Only those cargoes named in the vessel's Cargo Authority Attachment (CAA), serial #VN81000691, dated 31JAN00, may be carried.

STABILITY AND TRIM

Cargo tanks must be loaded uniformly whenever a 46 CFR Subchapter "O" cargo is carried; for trim purposes, the weight of cargo in each tank may exceed the uniformly loaded tank cargo weight by at most 5 percent.

--- Inspection Status ---

Cargo Tanks

Tank Id	Internal Exam			External Exam		
	Previous	Last	Next	Previous	Last	Next
1	23Mar2016	19Jul2021	31Mar2031	23Mar2016	19Jul2021	31Mar2026
2	23Mar2016	19Jul2021	31Mar2031	23Mar2016	19Jul2021	31Mar2026
			Hydro Test			
Tank Id	Safety Valves		Previous	Last	Next	
1	19Jul2021		-	-	-	



Temporary Certificate of Inspection

Vessel Name: USL - 145

2 30Jun2021

---Conditional Portable Fire Extinguisher Requirements---

Required Only During Transfer of Cargo or Operation of Barge Machinery

--- Fire Fighting Equipment ---

Fire Extinguishers - Hand portable and semi-portable

Quantity	Class Type
1	B-II

END



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: USL - 145
Official #: D583855

Page 1 of 1

Shipyard: INGALLS IRON
Hull #: 1897

List of Authorized Cargoes

Cargo Identification						Conditions of Carriage	
Name	Chem Code	Compat		Grade	Hull Type	Note	Special Requirements in 46 CFR 151 General and Mat'l's of Construction
		Group No	Exc				
Propylene oxide	POX	16	N	A	II		50-10, 50-13

Authorized Subchapter O Cargoes

Explanation of terms & symbols used in the Table:

Cargo Identification

- Name** The proper shipping name as listed in 46 CFR Table 151.05.
- Chem Code** The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual.
- Compatibility Group No.** The cargo reactive group number assigned for compatibility determinations in 46 CFR Part 150 Tables I and II. In accordance with 46 CFR 150.130, the Person-in-Charge of the barge is responsible for ensuring that the compatibility requirements of 46 CFR Part 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.
- Exceptions (Exc)** Indication of whether or not there are exceptions to the compatibility chart for the given cargo. See Appendix I to 46 CFR Part 150.
- Grade** The cargo classification assigned to each flammable or combustible liquid. Grades inside of "()" indicate a provisional assignment based upon literature sources which were not verified by manufacturers data. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.
- A, B, C** Flammable liquid cargoes, as defined in 46 CFR 30-10.22.
- D, E** Combustible liquid cargoes, as defined in 46 CFR 30-10.15.
- NA, NF** Those subchapter O cargoes which are not classified as a flammable or combustible liquid.
- #** No flammability/combustibility grade has been assigned yet, as the necessary flash point/vapor pressure data for such assignments are presently not available.
- Hull Type** The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1.
- I** Designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo. See 46 CFR 151.10-1(b)(1).
- II** Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3).
- III** Designed to carry products of sufficient hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4).

Conditions of Carriage

Note See Certificate of Inspection for explanation of symbols used in this column.

Safety valve inspection report

Certificate nr 803
Date 06-28-2021

Job no. LV-7933-SO
Client Lyondell
Barge # USL 145

Valve data

Set pressure (cold) 150 psi
Manufacturer Aquatrol
Type / Model 742DF1E2K1
Serial No. 91122-4

Size 3/4xDx1
Rating
Nozzle / Orifice D

Test data

Set pressure test

Found set pressure 154 psi
Reseat pressure (indication) 127 psi
Result Passed
Test method Air

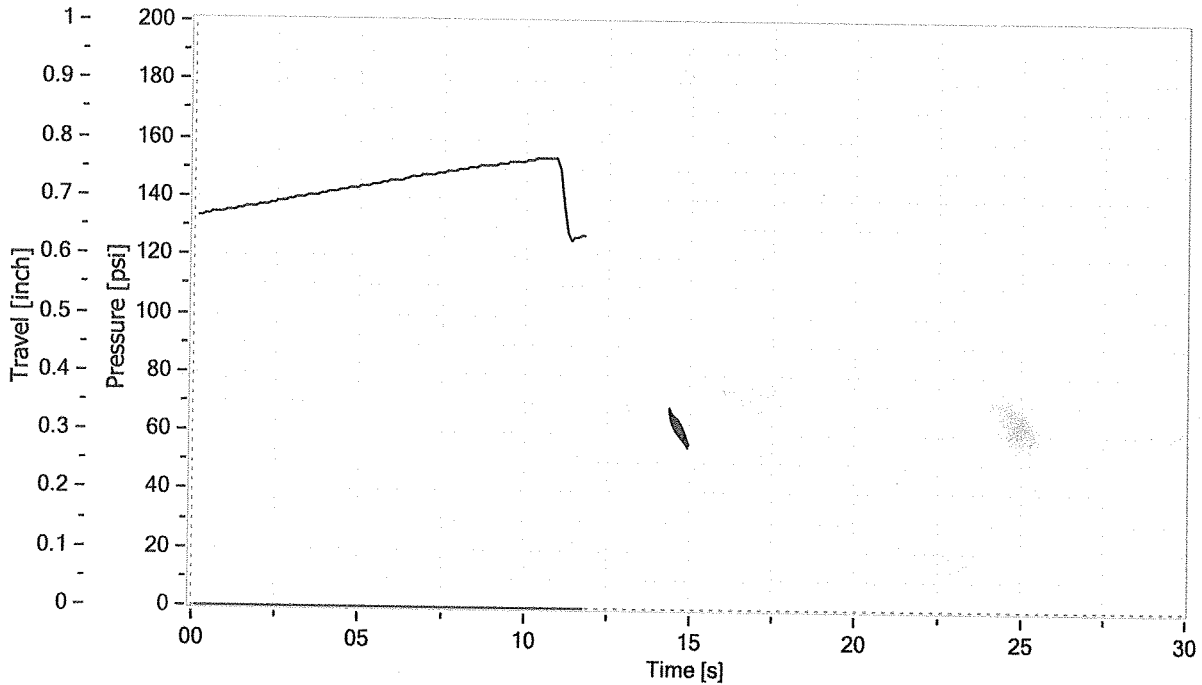
Seat tightness test

Leakage 0 bubbles/min.
Test pressure 138 psi
Result Passed

Backpressure test

Pressure -
Result -

Law Valve of Texas



Tested by

Name Javier Gutierrez

Date

6-28-21

Signature

Inspected by

Name David Theiler

Date 6-28-21

Signature

Safety valve inspection report

Certificate nr 802
Date 06-28-2021

Job no. LV-7933-SO
Client Lyondell
Barge # USL 145

Valve data

Set pressure (cold) 150 psi
Manufacturer Aquatrol
Type / Model 742DF1E2K1
Serial No. 91122-2

Size 3/4xDx1
Rating
Nozzle / Orifice D

Test data

Set pressure test

Found set pressure 153 psi
Reseat pressure (indication) 118 psi
Result Passed
Test method Air

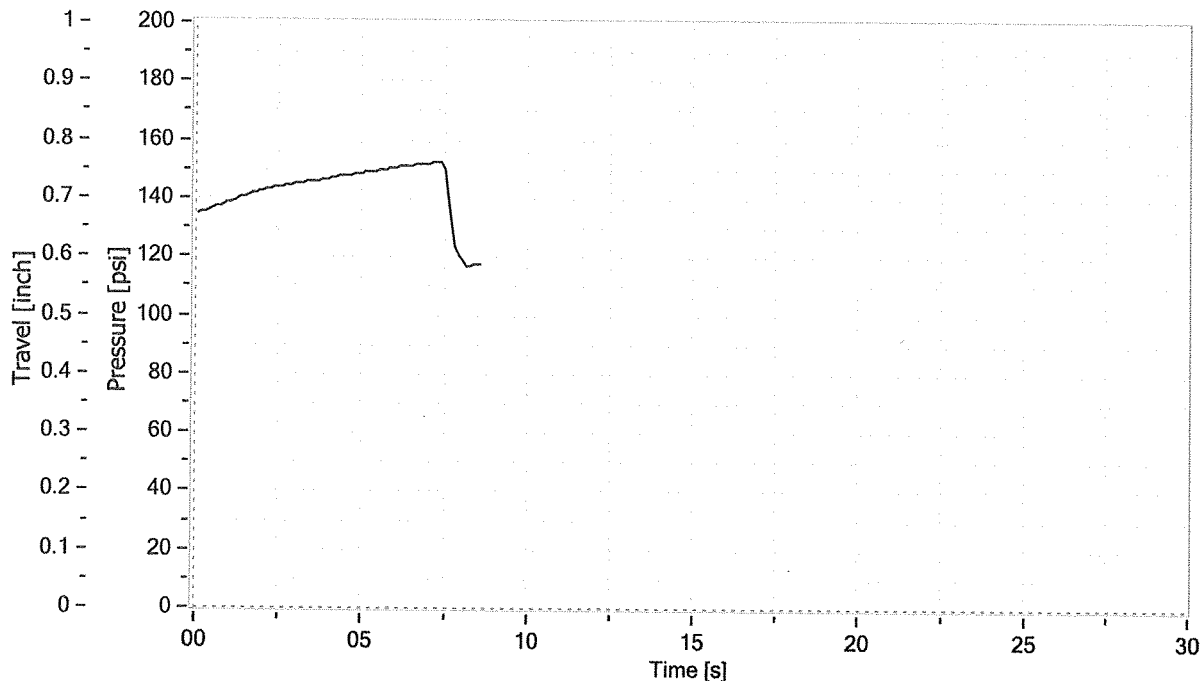
Seat tightness test

Leakage 0 bubbles/min.
Test pressure 138 psi
Result Passed

Backpressure test

Pressure -
Result -

Law Valve of Texas



Tested by
Name
Date
Signature

Javier Gutierrez

6-28-21

Inspected by
Name David Theiter
Date 6-28-21
Signature

Safety valve inspection report

Certificate nr 804
Date 06-28-2021

Job no. LV-7933-SO
Client Lyondell
Barge # USL 145

Valve data

Set pressure (cold) 81 psi
Manufacturer Aquatrol
Type / Model 742DD1E2K1
Serial No. C202103-10

Size 1/2xDx1
Rating
Nozzle / Orifice D

Test data

Set pressure test

Found set pressure 81 psi
Reseat pressure (indication) 57 psi
Result Passed
Test method Air

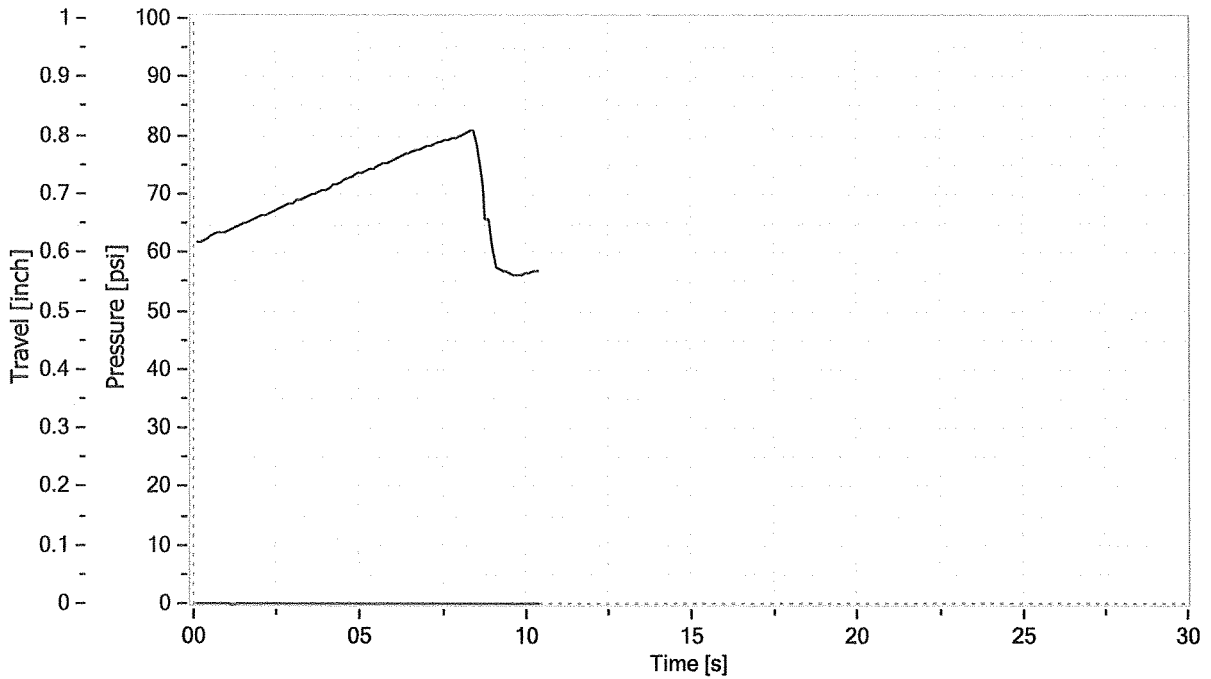
Seat tightness test

Leakage 0 bubbles/min.
Test pressure 73 psi
Result Passed

Backpressure test

Pressure -
Result -

Law Valve of Texas



Tested by

Name Javier Gutierrez

Date

6-28-21

Signature

Inspected by

Name David Theiler

Date 6-28-21

Signature

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 802589 Match Mark # 25898

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other


Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only					
Test	Low	High	SS Shell	CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425 <input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads					
<input checked="" type="checkbox"/> Verified all body bolts are torqued					

Test Date: 5-14-21 Technician:  Witness: 

Law Valve of Texas

Warren Ball Valve Rebuild Measurement Log

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25898

Body seat pocket ACTUAL Minor I.D. 4.142 Major I.D. 5.400 OAL 3.761

Cap seat pocket ACTUAL Minor I.D. 4.146 Major I.D. 5.400 OAL 1.405

Body packing pocket ACTUAL I.D. 1.692 Depth .622

Stem sleeve I.D. 1.397
Stem ACTUAL O.D. 1.376 Length 4.533

Collar teflon PTFE sleeve O.D. 1.384 Thickness .041

Ball ACTUAL O.D. 6.418
Ball MFG O.D. 6.421"

Teflon PTFE thrust washer:

ACTUAL	I.D. <u>1.398</u>	O.D. <u>1.721</u>	Thickness <u>.060</u>
MFG	I.D. <u>1.378"</u>	O.D. <u>1.653"</u>	Thickness <u>0.039"</u>

New seat ACTUAL	I.D. <u>4.167</u>	O.D. <u>5.380</u>	Thickness <u>.556</u>
	I.D. <u>4.187</u>	O.D. <u>5.420</u>	Thickness <u>.559</u>

New seat MFG	I.D. <u>4.172"</u>	O.D. <u>5.391"</u>	Thickness <u>0.547"</u>
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New packing ACTUAL	I.D. <u>1.377</u>	O.D. <u>1.685</u>	Height <u>.633</u>
New packing MFG	I.D. <u>1.375"</u>	O.D. <u>1.685"</u>	Height <u>0.781"</u>

Body gasket ACTUAL	I.D. <u>6.531</u>	O.D. <u>7.048</u>	Thickness <u>.134</u>
Body gasket MFG	I.D. <u>6.535"</u>	O.D. <u>7.046"</u>	Thickness <u>0.125"</u>

Body gasket pocket:	CAP	Minor O.D. <u>6.483</u>	Major O.D. <u>7.036</u>	Depth <u>.207</u>
	BODY	Minor O.D. <u>6.502</u>	Major O.D. <u>7.042</u>	Depth <u>.175</u>

Torque: 1 _____ 2 _____ 3 _____

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25897

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other

Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads						
<input checked="" type="checkbox"/> Verified all body bolts are torqued						

Test Date: 5-17-21 Technician: [Signature] Witness: [Signature]

Law Valve of Texas

Warren Ball Valve Rebuild Measurement Log

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25897

Body seat pocket ACTUAL Minor I.D. 4.143 Major I.D. 5.403 OAL 3.761

Cap seat pocket ACTUAL Minor I.D. 4.145 Major I.D. 5.399 OAL 1.403

Body packing pocket ACTUAL I.D. 1.699 Depth .619

Stem sleeve I.D. 1.401
Stem ACTUAL O.D. 1.374 Length 4.539

Collar teflon PFTE sleeve O.D. 1.384 Thickness .041

Ball ACTUAL O.D. 6.418
Ball MFG O.D. 6.421"

Teflon PFTE thrust washer:
ACTUAL I.D. 1.393 O.D. 1.719 Thickness .060
MFG I.D. 1.378" O.D. 1.653" Thickness 0.039"

New seat ACTUAL I.D. 4.153 O.D. 5.364 Thickness .556
I.D. 4.176 O.D. 5.396 Thickness .555

New seat MFG I.D. 4.172" O.D. 5.391" Thickness 0.547"

New packing ACTUAL I.D. 1.388 O.D. 1.693 Height .614
New packing MFG I.D. 1.375" O.D. 1.685" Height 0.781"

Body gasket ACTUAL I.D. 6.540 O.D. 7.042 Thickness .135
Body gasket MFG I.D. 6.535" O.D. 7.046" Thickness 0.125"

Body gasket pocket:
CAP Minor O.D. 6.485 Major O.D. 7.038 Depth .206
BODY Minor O.D. 6.504 Major O.D. 7.047 Depth .173

Torque: 1 _____ 2 _____ 3 _____

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 302584 Match Mark # 25896

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other

Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads						
<input checked="" type="checkbox"/> Verified all body bolts are torqued						

Test Date: 5-17-21 Technician: [Signature] Witness: [Signature]

Warren Ball Valve Rebuild
Measurement Log

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25896

Body seat pocket ACTUAL Minor I.D. 4.140 Major I.D. 5.396 OAL 3.763

Cap seat pocket ACTUAL Minor I.D. 4.143 Major I.D. 5.399 OAL 1.408

Body packing pocket ACTUAL I.D. 1.695 Depth .622

Stem sleeve I.D. 1.403
Stem ACTUAL O.D. 1.375 Length 4.539

Collar teflon PTFE sleeve O.D. 1.384 Thickness .041

Ball ACTUAL O.D. 6.415
Ball MFG O.D. 6.421"

Teflon PTFE thrust washer:
ACTUAL I.D. 1.401 O.D. 1.717 Thickness .060
MFG I.D. 1.378" O.D. 1.653" Thickness 0.039"

New seat ACTUAL I.D. 4.170 O.D. 5.390 Thickness .555
I.D. 4.194 O.D. 5.410 Thickness .555

New seat MFG I.D. 4.172" O.D. 5.391" Thickness 0.547"

New packing ACTUAL I.D. 1.373 O.D. 1.684 Height .621
New packing MFG I.D. 1.375" O.D. 1.685" Height 0.781"

Body gasket ACTUAL I.D. 6.523 O.D. 7.041 Thickness .134
Body gasket MFG I.D. 6.535" O.D. 7.046" Thickness 0.125"

Body gasket pocket:
CAP Minor O.D. 6.484 Major O.D. 7.039 Depth .209
BODY Minor O.D. 6.491 Major O.D. 7.042 Depth .170

Torque: 1 _____ 2 _____ 3 _____

Low Valve of Texas

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 302589 Match Mark # 25895

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other

Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
	<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads					
	<input checked="" type="checkbox"/> Verified all body bolts are torqued					

Test Date: 5-17-21 Technician: [Signature] Witness: [Signature]

Warren Ball Valve Rebuild
Measurement Log

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25895

Body seat pocket ACTUAL Minor I.D. 4.148 Major I.D. 5.400 OAL 3.761

Cap seat pocket ACTUAL Minor I.D. 4.143 Major I.D. 5.399 OAL 1.414

Body packing pocket ACTUAL I.D. 1.692 Depth .633

Stem sleeve I.D. 1.388
Stem ACTUAL O.D. 1.377 Length 4.538

Collar teflon PFTE sleeve O.D. 1.386 Thickness .041

Ball ACTUAL O.D. 6.418
Ball MFG O.D. 6.421"

Teflon PFTE thrust washer:
ACTUAL I.D. 1.403 O.D. 1.725 Thickness .061
MFG I.D. 1.378" O.D. 1.653" Thickness 0.039"

New seat ACTUAL I.D. 4.175 O.D. 5.403 Thickness .555
I.D. 4.188 O.D. 5.406 Thickness .555

New seat MFG I.D. 4.172" O.D. 5.391" Thickness 0.547"

New packing ACTUAL I.D. 1.380 O.D. 1.689 Height .628
New packing MFG I.D. 1.375" O.D. 1.685" Height 0.781"

Body gasket ACTUAL I.D. 6.540 O.D. 7.045 Thickness .135
Body gasket MFG I.D. 6.535" O.D. 7.046" Thickness 0.125"

Body gasket pocket:
CAP Minor O.D. 6.492 Major O.D. 7.036 Depth .206
BODY Minor O.D. 6.483 Major O.D. 7.038 Depth .174

Torque: 1 2 3

Law Valve of Texas

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25894

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other

Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads						
<input checked="" type="checkbox"/> Verified all body bolts are torqued						

Test Date: 5-17-21 Technician: [Signature] Witness: [Signature]

Law Valve of Texas

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25893

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other

Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads						
<input checked="" type="checkbox"/> Verified all body bolts are torqued						

Test Date: 5-17-21 Technician: [Signature] Witness: [Signature]

Law Valve of Texas

Warren Ball Valve Rebuild Measurement Log

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25893

Body seat pocket ACTUAL Minor I.D. 4.136 Major I.D. 5.396 OAL 3.762

Cap seat pocket ACTUAL Minor I.D. 4.147 Major I.D. 5.399 OAL 1.402

Body packing pocket ACTUAL I.D. 1.693 Depth .620

Stem sleeve I.D. 1.396
Stem ACTUAL O.D. 1.376 Length 4.531

Collar teflon PFTE sleeve O.D. 1.383 Thickness .041

Ball ACTUAL O.D. 6.416
Ball MFG O.D. 6.421"

Teflon PFTE thrust washer:
ACTUAL I.D. 1.399 O.D. 1.721 Thickness .060
MFG I.D. 1.378" O.D. 1.653" Thickness 0.039"

New seat ACTUAL I.D. 4.173 O.D. 5.393 Thickness .557
I.D. 4.170 O.D. 5.392 Thickness .555

New seat MFG I.D. 4.172" O.D. 5.391" Thickness 0.547"

New packing ACTUAL I.D. 1.373 O.D. 1.684 Height .626
New packing MFG I.D. 1.375" O.D. 1.685" Height 0.781"

Body gasket ACTUAL I.D. 6.532 O.D. 7.044 Thickness .135
Body gasket MFG I.D. 6.535" O.D. 7.046" Thickness 0.125"

Body gasket pocket:
CAP Minor O.D. 6.481 Major O.D. 7.016 Depth .206
BODY Minor O.D. 6.485 Major O.D. 7.033 Depth .176

Torque: 1 _____ 2 _____ 3 _____

Law Valve of Texas

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # SO2589 Match Mark # 25892

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other



Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads						
<input checked="" type="checkbox"/> Verified all body bolts are torqued						

Test Date: 5-17-21 Technician:  Witness: 

Law Valve of Texas

Warren Ball Valve Rebuild Measurement Log

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 502589 Match Mark # 25892

Body seat pocket ACTUAL Minor I.D. 4.141 Major I.D. 5.397 OAL 3.761

Cap seat pocket ACTUAL Minor I.D. 4.146 Major I.D. 5.396 OAL 1.403

Body packing pocket ACTUAL I.D. 1.696 Depth .6185

Stem sleeve I.D. 1.405
Stem ACTUAL O.D. 1.382 Length 4.938

Collar teflon PFTE sleeve O.D. 1.384 Thickness .041

Ball ACTUAL O.D. 6.417
Ball MFG O.D. 6.421"

Teflon PFTE thrust washer:

ACTUAL	I.D. <u>1.394</u>	O.D. <u>1.717</u>	Thickness <u>.061</u>
MFG	I.D. <u>1.378"</u>	O.D. <u>1.653"</u>	Thickness <u>0.039"</u>

New seat ACTUAL	I.D. <u>4.177</u>	O.D. <u>5.397</u>	Thickness <u>.555</u>
	I.D. <u>4.161</u>	O.D. <u>5.383</u>	Thickness <u>.555</u>

New seat MFG	I.D. <u>4.172"</u>	O.D. <u>5.391"</u>	Thickness <u>0.547"</u>
--------------	--------------------	--------------------	-------------------------

New packing ACTUAL	I.D. <u>1.366</u>	O.D. <u>1.693</u>	Height <u>.620</u>
New packing MFG	I.D. <u>1.375"</u>	O.D. <u>1.685"</u>	Height <u>0.781"</u>

Body gasket ACTUAL	I.D. <u>6.542</u>	O.D. <u>7.050</u>	Thickness <u>.134</u>
Body gasket MFG	I.D. <u>6.535"</u>	O.D. <u>7.046"</u>	Thickness <u>0.125"</u>

Body gasket pocket:	CAP	Minor O.D. <u>6.493</u>	Major O.D. <u>7.038</u>	Depth <u>.207</u>
	BODY	Minor O.D. <u>6.486</u>	Major O.D. <u>7.040</u>	Depth <u>.174</u>

Torque: 1 _____ 2 _____ 3 _____

Warren Ball Valve Rebuild Condition Report

Job # LV-7840-WO
Barge # USL 145
Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
Pressure: 150 300 Serial # 302589 Match Mark # 25891

Type Gear Operated Air Operated

Body match mark # _____
Body condition Good Pitted Other

Cap match mark # _____
Cap condition Good Pitted Other

Ball match mark # _____
Ball condition Good Pitted Other

Stem match mark # _____
Stem condition Good Pitted Other Renew

Stem bolting Reuse Replace

Testing Personnel Only						
Test	Low	High	SS Shell		CS Shell	
PSI	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 80	<input checked="" type="checkbox"/> 425	<input type="checkbox"/> 1100	<input type="checkbox"/> 450	<input type="checkbox"/> 1125
<input checked="" type="checkbox"/> Visually checked body bolts for 2 or more threads						
<input checked="" type="checkbox"/> Verified all body bolts are torqued						

Test Date: 5-17-21 Technician: [Signature] Witness: [Signature]

Warren Ball Valve Rebuild Measurement Log

Job # LV-7840-WO
 Barge # USL 145
 Date: 5-4-21

Size: 2 3 4 6 8 Material: CS SS
 Pressure: 150 300 Serial # 502589 Match Mark # 25891

Body seat pocket ACTUAL Minor I.D. 4.143 Major I.D. 5.399 OAL 3.764

Cap seat pocket ACTUAL Minor I.D. 4.147 Major I.D. 5.397 OAL 1.402

Body packing pocket ACTUAL I.D. 1.683 Depth .639

Stem sleeve I.D. 1.398
 Stem ACTUAL O.D. 1.385 Length 4.531

Collar teflon PTFE sleeve O.D. 1.398 Thickness .041

Ball ACTUAL O.D. 6.417
 Ball MFG O.D. 6.421"

Teflon PTFE thrust washer:
 ACTUAL I.D. 1.401 O.D. 1.716 Thickness .060
 MFG I.D. 1.378" O.D. 1.653" Thickness 0.039"

New seat ACTUAL I.D. 4.173 O.D. 5.41 Thickness .554
 I.D. 4.180 O.D. 5.389 Thickness .555

New seat MFG I.D. 4.172" O.D. 5.391" Thickness 0.547"

New packing ACTUAL I.D. 1.380 O.D. 1.687 Height 1.085.744
 New packing MFG I.D. 1.375" O.D. 1.685" Height 0.781"

Body gasket ACTUAL I.D. 6.553 O.D. 7.065 Thickness .136
 Body gasket MFG I.D. 6.535" O.D. 7.046" Thickness 0.125"

Body gasket pocket:
 CAP Minor O.D. 6.488 Major O.D. 7.035 Depth .207
 BODY Minor O.D. 6.487 Major O.D. 7.050 Depth .169

Torque: 1 _____ 2 _____ 3 _____

SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 666
 Date 05-14-2021
 Tested to API 598 Standard

Job no. LV-7840-WO
 Client Lyondell
 Barge # USL 145

Valve data

Manufacturer Warren
 Type / Model 6156FS
 Serial No. S02589-8

Size 4
 Rating 150
 Fluid Liquid

Test results

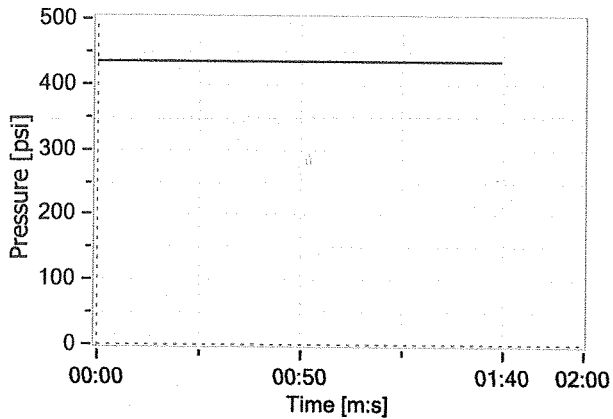
Body test

Pressure 435 psi
 Time 1:39

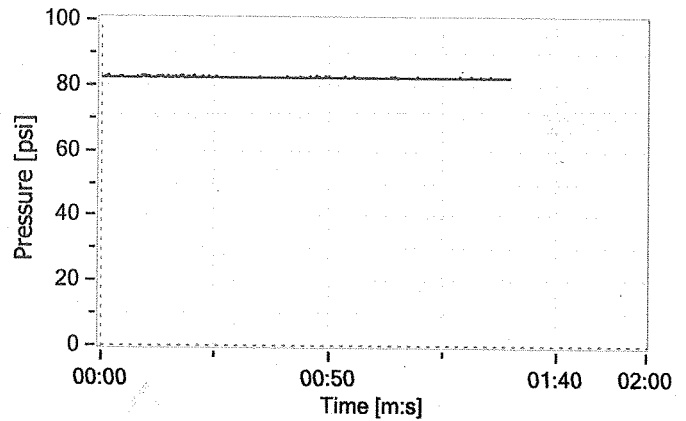
Seat tests

	AB	BA
Pressure	83 psi	84 psi
Time	1:31	1:33
Leakage	0 bubbles/min.	0 bubbles/min.

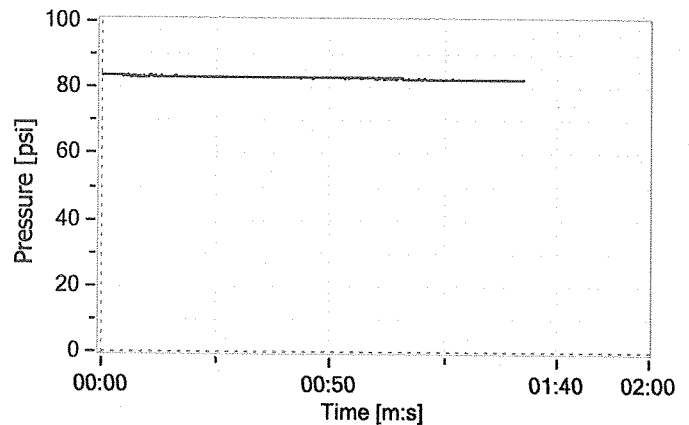
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez
 Date 5-17-21
 Signature

Inspected by

Name David Theiler
 Date 5-17-21
 Signature

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 667
Date 05-17-2021
Tested to API 598 Standard

Job no. LV-7840-WO
Client Lyondell
Barge # USL 145

Valve data

Manufacturer Warren
Type / Model 6156FS
Serial No. S02589-7

Size 4
Rating 150
Fluid Liquid

Test results

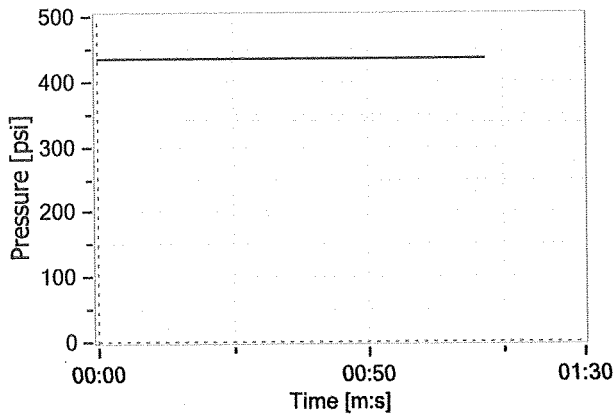
Body test

Pressure 434 psi
Time 1:11

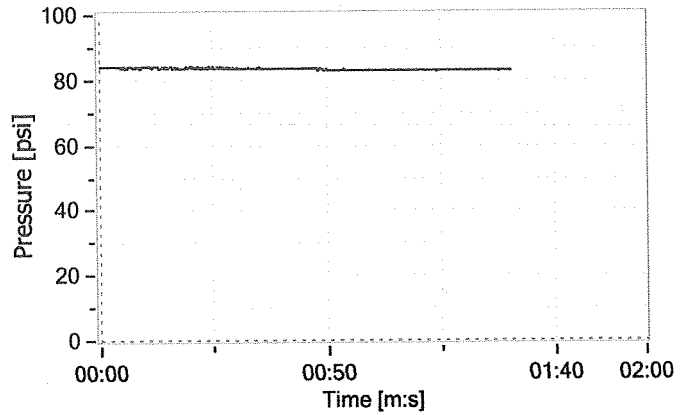
Seat tests

	AB	BA
Pressure	84 psi	85 psi
Time	1:31	1:39
Leakage	0 bubbles/min.	0 bubbles/min.

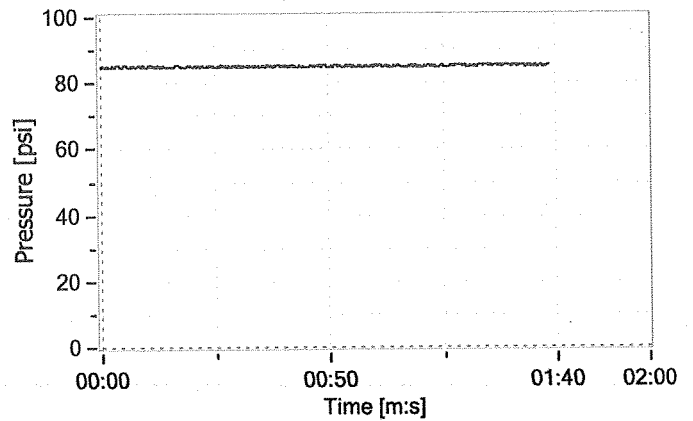
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez

Date 5-17-21

Signature

Inspected by

Name David Theiler

Date 5-17-21

Signature

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 676
Date 05-17-2021
Tested to API 598 Standard

Job no. LV-7840-WO
Client Lyondell
Barge # USL 145

Valve data

Manufacturer Warren
Type / Model 6156FS
Serial No. S02589-6

Size 4
Rating 150
Fluid Liquid

Test results

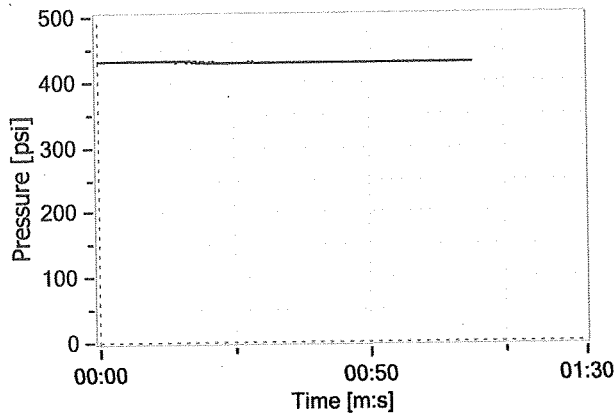
Body test

Pressure 431 psi
Time 1:09

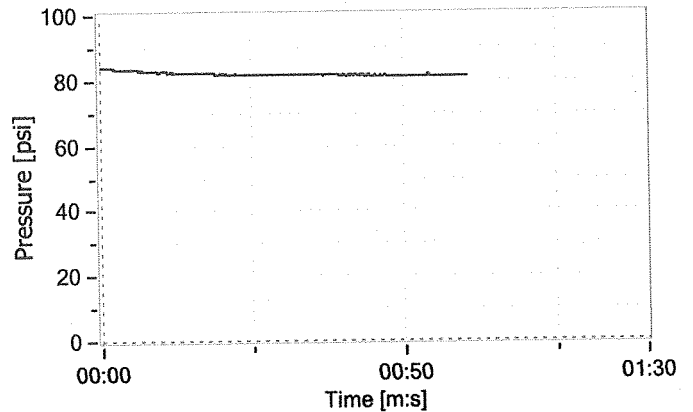
Seat tests

	AB	BA
Pressure	84 psi	86 psi
Time	1:01	1:06
Leakage	0 bubbles/min.	0 bubbles/min.

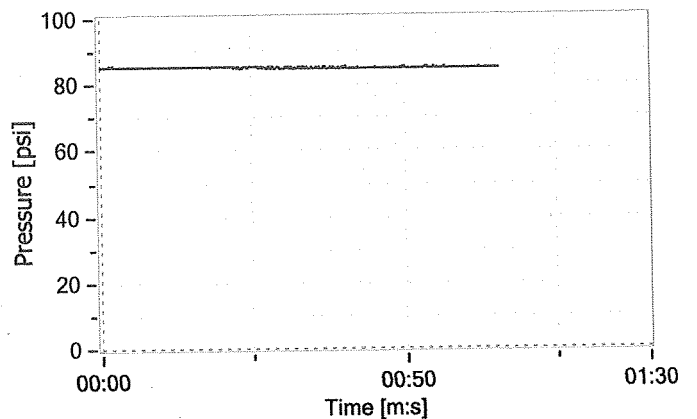
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez
Date 5-17-21
Signature *[Signature]*

Inspected by

Name David Theiler
Date 5-17-21
Signature *[Signature]*

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 658
Date 05-13-2021
Tested to API 598 Standard

Job no. LV-7840-WO
Client Lyondell
Barge # USL 145

Valve data

Manufacturer Warren
Type / Model 6156FS
Serial No. S02589-5

Size 4
Rating 150
Fluid Liquid

Test results

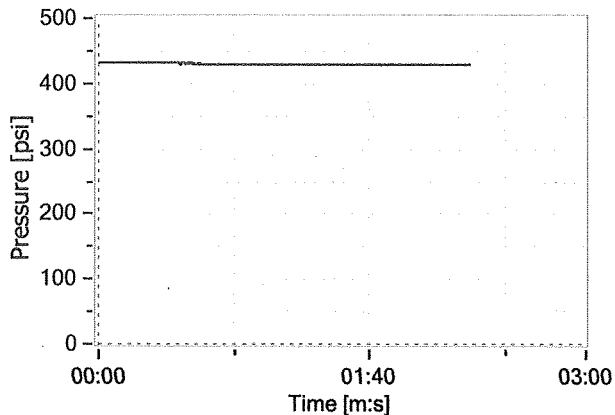
Body test

Pressure 432 psi
Time 2:17

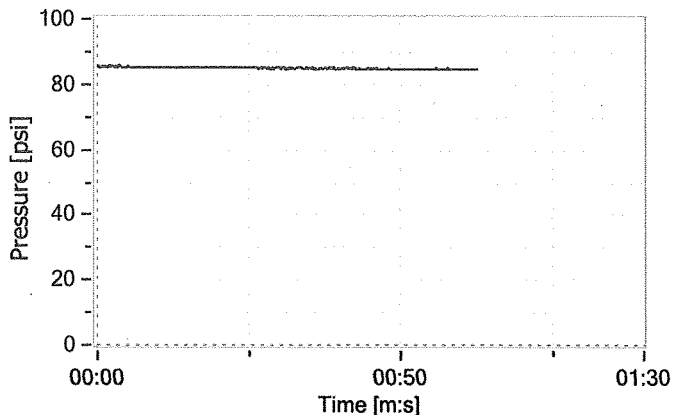
Seat tests

	AB	BA
Pressure	85 psi	85 psi
Time	1:03	1:02
Leakage	0 bubbles/min.	0 bubbles/min.

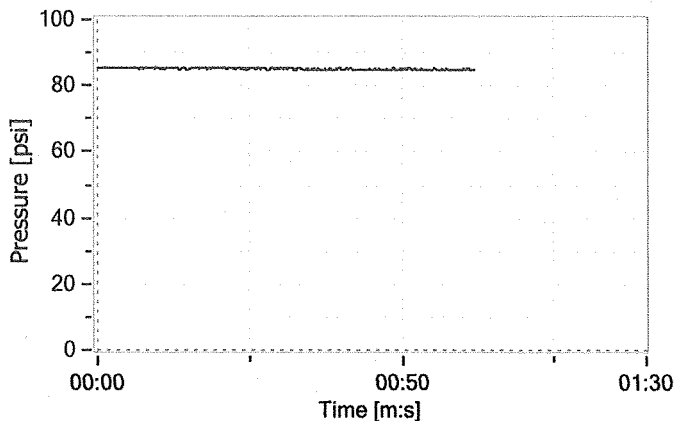
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez

Date 5-17-21

Signature 

Inspected by

Name David Theiler

Date 5-17-21

Signature 

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 665
Date 05-14-2021
Tested to API 598 Standard

Job no. LV-7840.2W0
Client Lyondell
Barge # USL 145

Valve data

Manufacturer Warren
Type / Model 6156FS
Serial No. S02589-4

Size 4
Rating 150
Fluid Liquid

Test results

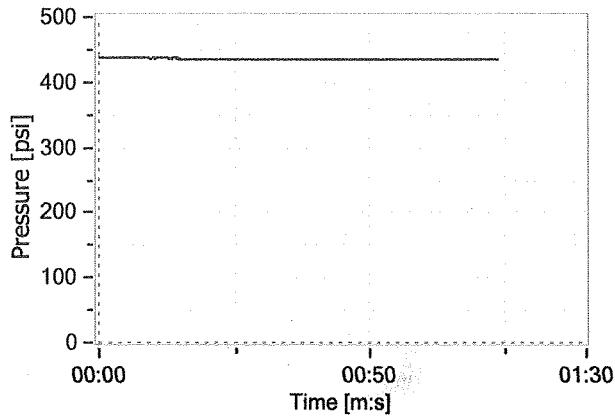
Body test

Pressure 437 psi
Time 1:14

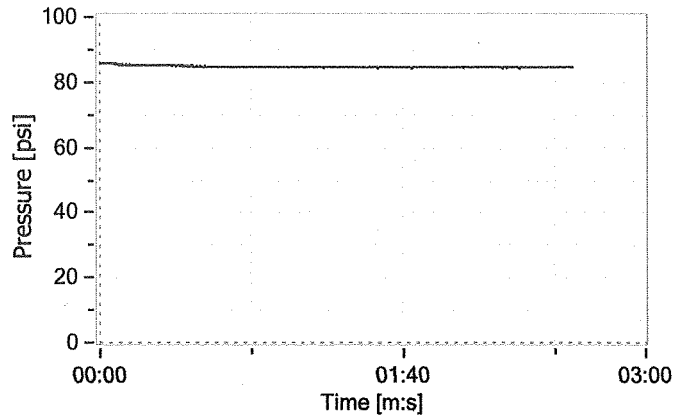
Seat tests

	AB	BA
Pressure	86 psi	83 psi
Time	2:37	1:11
Leakage	0 bubbles/min.	0 bubbles/min.

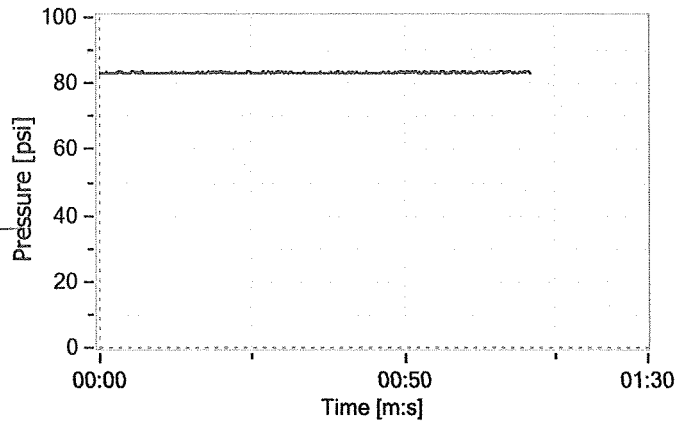
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez
Date 5-17-21
Signature

Inspected by

Name David Theiler
Date 5-17-21
Signature

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 664
Date 05-14-2021
Tested to API 598 Standard

Job no. LV-7840-WO
Client Lyondell
Barge # USL 145

Valve data

Manufacturer Warren
Type / Model 6156FS
Serial No. S02589-3

Size 4
Rating 150
Fluid Liquid

Test results

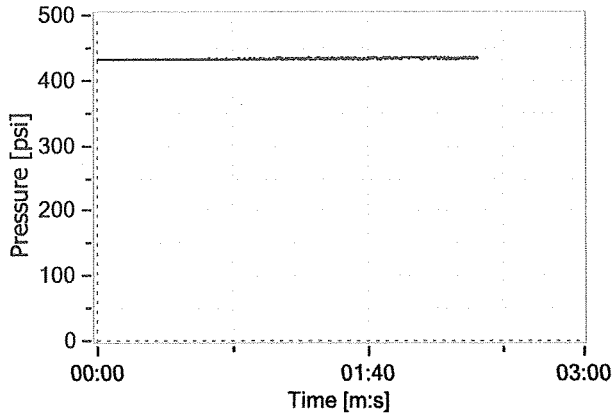
Body test

Pressure 433 psi
Time 2:21

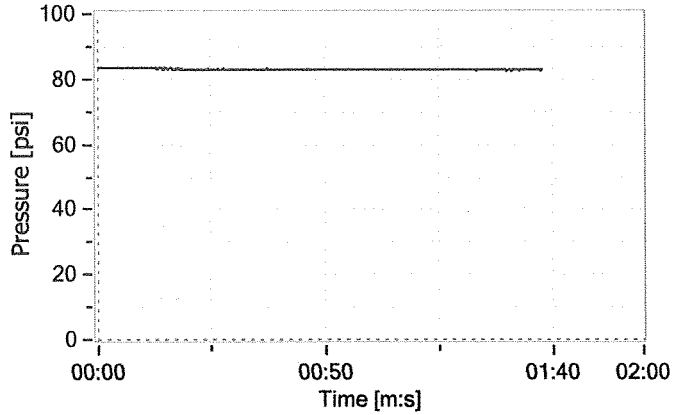
Seat tests

	AB	BA
Pressure	84 psi	83 psi
Time	1:39	1:50
Leakage	0 bubbles/min.	0 bubbles/min.

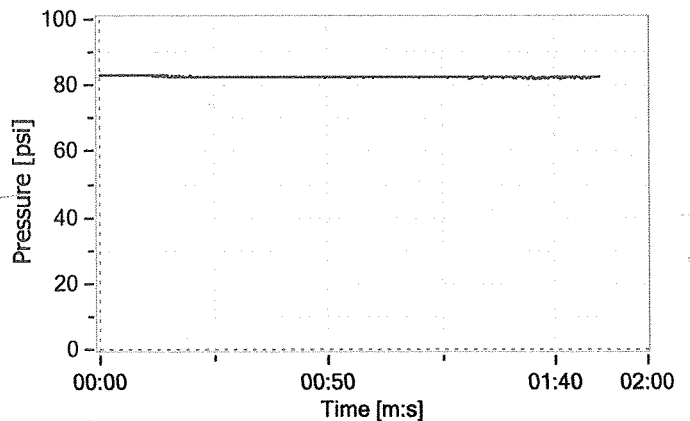
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez
Date 5-17-21
Signature *[Signature]*

Inspected by

Name David Theiler
Date 5-17-21
Signature *[Signature]*

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 660
 Date 05-14-2021
 Tested to API 598 Standard

Job no. LV-7840-WD
 Client Lyondell
 Barge # USL 145

Valve data

Manufacturer Warren
 Type / Model 6156FS
 Serial No. S02589-2

Size 4
 Rating 150
 Fluid Liquid

Test results

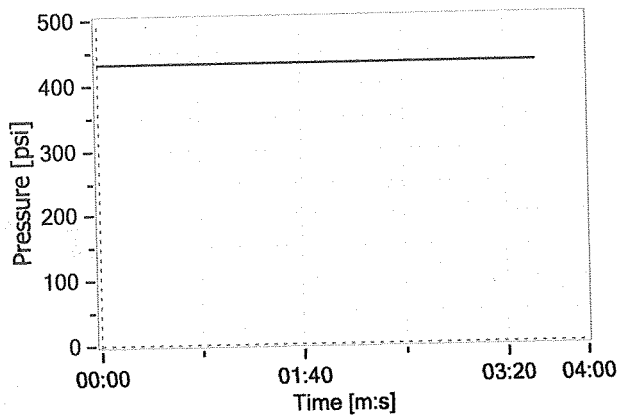
Body test

Pressure 431 psi
 Time 3:35

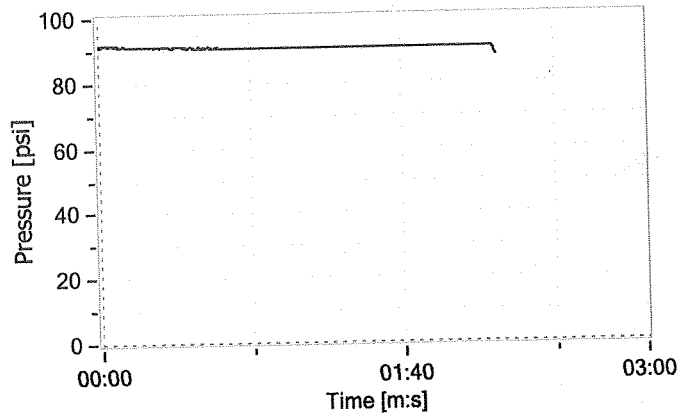
Seat tests

	AB	BA
Pressure	91 psi	84 psi
Time	2:12	1:14
Leakage	0 bubbles/min.	0 bubbles/min.

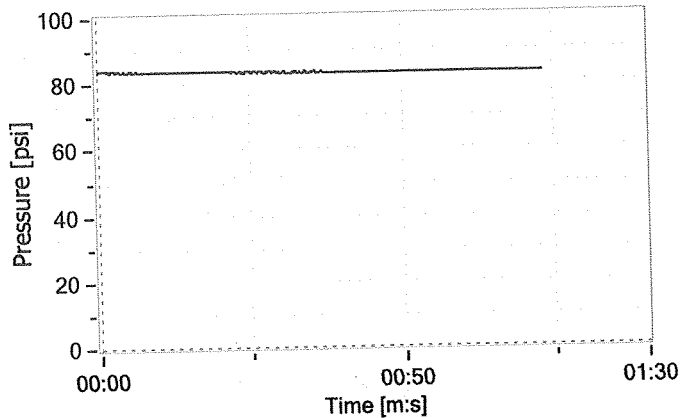
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name

Javier Gutierrez

Date

5-17-21

Signature

Inspected by

Name

David Theiler

Date

5-17-21

Signature

Law Valve of Texas



SHUT-OFF VALVE INSPECTION REPORT

Certificate nr 659
Date 05-14-2021
Tested to API 598 Standard

Job no. LV-7840-WO
Client Lyondell
Barge # USL 145

Valve data

Manufacturer Warren
Type / Model 6156FS
Serial No. S02589-1

Size 4
Rating 150
Fluid Liquid

Test results

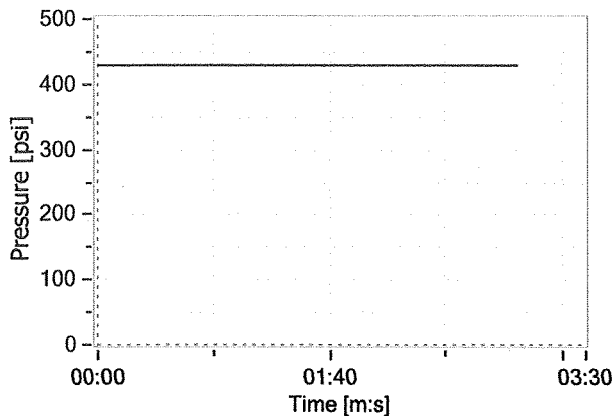
Body test

Pressure 429 psi
Time 3:00

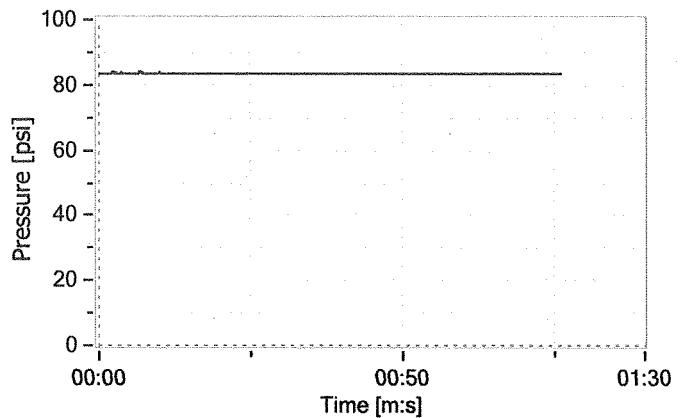
Seat tests

	AB	BA
Pressure	84 psi	86 psi
Time	1:17	1:08
Leakage	0 bubbles/min.	0 bubbles/min.

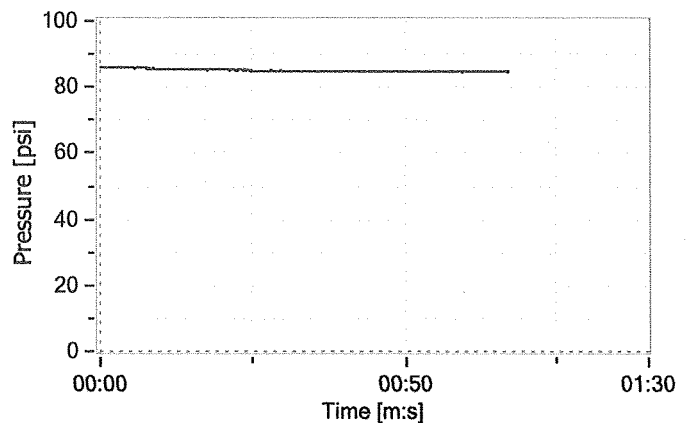
BODY TEST GRAPH



SEAT TEST GRAPH AB



SEAT TEST GRAPH BA



Result

Tested by

Name Javier Gutierrez

Date 5-17-21

Signature

Inspected by

Name David Theiler

Date 5-17-21

Signature

Law Valve of Texas