API Standard 641, First Edition, 2016 Test Report

"Type Testing of Quarter-turn Valves for Fugitive Emissions"

Performed for

SCV Valve LLC

www.scvvalve.com

6 inch Class 600 Trunnion Ball Valve Product Code: BAL0606B1215RGFV15DC/S

Project Number: 220299
Test Start Date: March 1, 2021

Performed by

YARMOUTH RESEARCH AND TECHNOLOGY, LLC

434 Walnut Hill Road North Yarmouth, ME 04097 USA (207) 829-5359

info@yarmouthresearch.com www.yarmouthresearch.com

Yarmouth Research and Technology, LLC

API 641 TEST CERTIFICATE

Certificate Number: 220299A	Test Start Date:	3/1/2021
	Test End Date:	3/5/2021

Customer:	SCV Valve LLC		
Web Address:	www.scvvalve.co	om	
Manufacturer Location:	5321 FM 646 Rd	d North, Santa Fe, Texas 7	7510
Valve Information			
Valve Size:	6"	Valve Pressure Class:	600
Valve Description:	6 inch Class 600	Trunnion Ball Valve	
Product Code:	BAL0606B1215	RGFV15DC/S	
Assembly Drawing No.:	BAL0606B1215	RGFV15DC/S	
API/ASME Desig	n Standards: AF	PI 6D	
Stem Seal Description:	Dual O-rings + 2	2 Graphoil Rings	
Body Sea	l Description: A3	50 LF2	

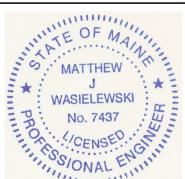
Test Results					
Test Specification: API 641, First Edition, 2016					
Max. Allowable Stem Seal Leakage:	100	PPMv Methane			
Number of Mechanical Cycles:	610				
High Temperature:	350	deg. F			
Test Pressure at Ambient Temp.:	600 psig				
Test Pressure at High Temp.:	600 psig				
Did valve pass test requirements?	YES				

Valves of the same quarter-turn design as the test valve may be deemed to be qualified subject to paragraph 11 of the test specification.

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Matthew J. Wasielewski, PE President and Manager Yarmouth Research and Technology, LLC 434 Walnut Hill Road North Yarmouth, ME 04097 USA

Customer Information



Yarmouth Research and Technology, LLC

FUGITIVE EMISSION TEST SUMMARY

Customer: SCV Valve LLC	Start Date: 3/1/2021
Project Number: 220299	End Date: 3/5/2021
IME C ID 114 MOOI EMEGAO DINI 41 C	, T. M. 55710

Manufacturing Facility: 5321 FM 646 Rd North, Santa Fe, Texas 77510

Valve	In	form	ation
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e injormation		
Valve Description: 6 inch Class 600 Trun	nion Ball Valve	
Product Code: BAL0606B1215RGFV	15DC/S	
Valve Selected by: Manufacturer		
API/ASME Design Standard(s): API 6D		
Body Material: A350 LF2	Stem Material: A182 F6A Cl. 2	
Body Seal Description: A350 LF2		

Manufacturer's Published Running Torque: 328 ft-lb Closing Torque: 655 ft-lb

Stem Seal Information

Stem Seal Description: Dual O-	-rings + 2 Graphoil R	ings		
Recommended Packing Torque: N/A				
Nominal ID: 2.3	8 inches	OD:	2.75	inches
Minimum Sealing Stress: Not Provided		Stack Height:	0.375	inches
Stem Seal Chamber Depth: 0.31	12 inches	# of Rings:	2	

Test Conditions

Test Specification: API 641, First Edition, 2016			
Maximum Allowable Leakage:	100	PPMv	
Cycling Rate:	30	seconds per cycle	
Maximum Temperature:	350	F	
Amb. Temp. Test Pressure: 600 psig	High Te	mp. Test Pressure: 600 psig	

Stem Seal Leakage Data

Cycle	Stem Seal	Pressure	Static Lea	kage (PPMv)	Dynamic Lea	kage (PPMv)
Number	Temp - (F)	(psig)	Avg.	Max.	Avg.	Max.
0	64	600	0	0		
100	64	600	1	2	3	6
101	348	600	18	21		
200	350	600	15	17	19	22
201	80	600	1	2		
300	80	600	1	1	1	1
301	351	600	1	2		
400	346	600	2	3	2	3
401	79	600	1	2		
500	78	600	1	1	1	1
501	349	600	0	1		
600	349	600	1	2	1	2
601	61	600	1	1		
610	60	600	1	1	1	1
		Averages ->	3	4	4	5
	N	Iaximums ->	18	21	19	22

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Body Seal Leakage

Leak	Cycle	Bonnet	Pressure	Leakage (PPMv)	
Path	Number	Temp - (F)	(psig)	Avg.	Max.
Body Seal A	0	64	600	0	1
Body Seal B	0	65	600	0	1
Bonnet Seal	0	65	600	0	1
Trunnion Seal	0	65	600	0	1
Body Seal A	610	63	600	1	1
Body Seal B	610	63	600	1	1
Bonnet Seal	610	64	600	1	2
Trunnion Seal	610	64	600	1	2

 $Operating\ Actuator\ Pressure$

Operating Actuator Pressure First Cycle:	30	psig
Operating Actuator Pressure Last Cycle:	27	psig

Results

Resuits				
	Number of Mechanical Cycles Completed:	610		
	Number of Thermal Cycles Completed:	3		
	Maximum Static Leakage Throughout Test:	21	PPMv	
	Maximum Dynamic Leakage Throughout Test:	22	PPMv	
	Maximum Body/Bonnet Leakage Throughout Test:	2	PPMv	

Final Test Results:	PASS
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Qualifications of similar valves according to para. 11 of test standard per		
	Valve Group:	D

Test Notes:

Certified By

Matthew J Wasielewski, PE President and Manager

Yarmouth Research and Technology, LLC

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Test Technician: Jesse Jarvi

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No. 7437

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