ISO 15848-1:2015
Methane Fugitive Emission Test Report

Performed for

Guide Valve Limited

www.gvs-vci.com

3 inch Floating Ball Valve – 2 Piece Design –
ANSI 300 – Flanged Ends
Product Code: VCI 3” F200K ANSI 300

Project Number: 216117
Test Start Date: May 12, 2016

Performed by

YARMOUTH RESEARCH AND TECHNOLOGY, LLC

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Fugitive Emission Test Data Sheet

Customer: Guide Valve Limited **Date:** 5/12/2016

Project #: 216117

Product Description: 3" Floating ball valve - 2 piece design - ANSI 300 - Flanged ends

Product Code: VCI 3" F200K ANSI 300

Packing Description: Graphite packing + Elastomeric O-ring stem seals

Sample Supplied by: Customer

Stem Diameter: 24 mm.

Packing Nut Torque: 275 in.lbf

Test Conditions

Test Standard: ISO/FDIS 15848-1:2015 **Test Stand:** Yarmouth Stand 1

Tightness Class: BM **Allowable:** 100 PPMv

Test Media: Methane

Endurance Class: CO3 2500 Mechanical Cycles

Temperature Class: 200C 4 Thermal Cycles

Pressure Class: ANSI 300 **Rating:** 740 psig @ambient 635 psig @high temp

Testing Method: Suck Through Method

Mounting Position: Stem and Bore Horizontal

Max. Allowable Bonnet Gasket Leakage: 50 PPMv by sniffing method

Leakage Device: Baseline

Cycling Rate: 1 cycle per 60 seconds

Test Data Summary - Stem Seal

Cycle Number	*Nom.Temp (C)*	*Static Stem Seal Leakage (PPMv)*		*Packing Retorque See Notes*
		Avg.	*Max.*	
0	20	2	2	
50	20	1	2	
50	200	25	32	
100	200	3	4	
100	20	2	3	
150	20	0	1	
150	200	5	6	
200	200	5	6	
205	20	7	8	
1,000	20	3	4	
1,000	200	7	8	
1,500	200	5	6	
1,500	20	2	2	
2,000	20	3	8	
2,000	200	9	10	
2,500	200	11	12	
2,500	20	5	6	
Maximum Leakage:		**25**	**32**	
Maximum Allowable:		**100**	**100**	

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Test Data Summary - Bonnet Seal

Cycle Number	*Nom.Temp (C)*	*Leakage - PPMv*	
		Avg.	*Max.*
0	20	1	2
205	20	8	10
1,500	20	12	15
2,500	20	13	18
Maximum Leakage:		**13**	**18**
Maximum Allowable:		**50**	**50**

Test Data Summary - Operating Actuator Pressure

Cycle Number	*Nom.Temp (C)*	*Operating Actuator Pressure (psig)*
0	20	18
2,500	20	15

Packing Retorque Notes:

Adjustment Number	*Static Leakage Readings before Tightening (PPMv)*		*Before Adjustment Nut Torque (in-lb)*	*After Adjustment Nut Torque (in-lb)*	*Operating Actuator Pressure (psig)*	
	Avg.	*Max.*			*Before Adjustment*	*After Adjustment*
1						
2						
3						
	100	**100**	**<- Maximum Allowable Leakage**			

Results

The valve met the requirements of the CO3 endurance level for the 200 C temperature class and the BM tightness class with no packing adjustments.

Certified By

Matthew J. Wasielewski, PE
President and Manager
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