



Type Testing of Industrial Valves for Fugitive Emissions

Office: Halifax, NS Canada

Date: 15 May 2024

This Certificate is issued to Velan Inc., 7007 Cote De Liesse, Montreal, QC H4T 1G2 to certify that the undersigned inspector did, at their request, attend on and between the aforementioned dates, their Plant 1 at 300 McArthur Street, Montreal QC H4T 1X8 Canada for witnessing Fugitive Emissions tests carried out on 4" #2500 Pressure Seal Gate Valve as per ISO 15848-1:2015 +A1:2017

Test Valve Figure Number: B12-4054P-02TS

Manufacturer: Velan Inc. 7007 Cote De Liesse, Montreal, QC, H4T 1G2 Canada

Description: Pressure Seal Gate Valve with welded end connections

Size and class: NPS 4/Class 2500

Stem diameter: 1.125 inches

Stem movement: rising, non-rotating stem

Stem packing: Packing composed with 2 braided graphite end rings (VEL-PS-117) and 4 ribbon graphite middle rings (VEL-PS-116)

Gasket Type: Pressure seal graphite gasket

Test Duration: 19 March 2024 to 01 May 2024

The product satisfies the following requirements.

1. ISO 15848-1:2015 + A1:2017
ISO FE AH-CO3-SSA1-t400-Class 2500-ISO15848-1(2015)+A1(2017)
Stem diameter qualified range is 0.56 inches to 2.25 inches
2. TA-Luft: Leakage rate Leakage Test $l \leq 10^{-2}$ mbar
Sealing characteristics as per ASME B16.20
Continuous functionality under operating conditions (500 mechanical full stroke cycles with two thermal cycles)

For scope of inspection carried out against abovementioned requirements, LRQA Canada Limited visit report Numbers PRJ11100428456/1, /2 and /3 refer.

This certificate is based on the test program of ISO 15848-1:2015+A1:2017 and TA Luft VDI2240 Section 2.3, Paragraph 2.3.1 and 2.3.1.3, Table 6 Annex on "test method" which covers qualification testing of flange seals with respect to their leak rate and continuous functionality and verification of sealing characteristics and controlled production quality.

LRQA Canada Limited	
Name: V Govande for James DiCesar	Signature:
Date: 12 June 2024	
Ref No.: PRJ11100428456	
Office: Halifax NS Canada	A member of the LRQA Group Limited

LRQA003 11.2021

James DiCesar
Surveyor to LRQA Canada Limited

A subsidiary of LRQA Group Limited

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