THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS

**January 9, 2020**

**Mr. Brad Mercadal**
**ValvTechnologies, Incorporated**
**5904 Bingle Road**
**Houston, TX 77092**

**SUBJECT: Scope Change, Valve Type: Z***-105***8***
**NB Capacity Certification: VLC-M59105**

Dear Mr. Mercadal:

Enclosed please find a copy of test number 51081S which was performed at the National Board Testing Laboratory on January 7, 2020, for the purpose of adding a new inlet and outlet configuration to the subject capacity certification. This test was performed in accordance with paragraph PG-69.6 of Section I of the ASME Code with steam as the test medium.

The valve had a measured slope of **41.21 PPH/PSIA.** This slope **is within** the required range of ± 5 % of the average slope of **42.29 PPH/PSIA** established during provisional testing.

**ValvTechnologies, Incorporated** has successfully completed testing to add the new inlet and outlet configuration to the subject capacity certification.

Yours truly,

Austin Peck

Austin Peck
Manager of Pressure Relief Testing Laboratory

ENCLOSURE(S)

FILE: <200109 VLC-M59105 SCOPE CHANGE TESTING PASS>

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# National Board Testing Laboratory

## Steam Test - Timed Weight Method

| | Valve ID Data | Revision 4 | apps\Labview Programs\DATA\Steam Tests\51081S.xls |
|---|---|---|---|
| 1 | Test Number | 51081S | |
| 2 | Test Sponsor | **ValvTechnologies, Incorporated** | |
| 3 | Company Type | Manufacturer | Houston, TX |
| 4 | Test Date | 1/7/2020 | VLC |
| 5 | Valve Type | Z_105 | |
| 6 | Manufacturer | ValvTechnologies, Incorporated | |
| 7 | Cap. Cert. ID No. | 59105 | |
| 8 | Set Pressure | | |
| 9 | Inlet Size | 1 1/2 Fl | |
| 10 | Outlet Size | 2 Fl | |
| 11 | Stamped Capacity | Not Stamped | |
| 12 | Code Section | I | |
| 13 | Serial Number | XQJ01 | |
| 14 | Date Code | | |
| | **Operational Data and Measured Dimensions** | | |
| 15 | Warn Pressure | | psig |
| 16 | Set Pressure | | psig |
| 17 | Reset Set Pressure | | psig |
| 18 | Blowdown | | psi |
| 19 | Reset Blowdown | | psi |
| 20 | Bore Diameter | 1.055 | inch |
| 21 | Lift | | inch |
| | **Measured Data** | | |
| 22 | Flow Area | 0.87417 | $in^2$ |
| 23 | Vessel Pressure | 125.0 | psig |
| 24 | $P_b$ | 14.25 | psia |
| 25 | Calorimeter Temp. | 293.5 | °F |
| 26 | Time of Run | 4.0 | minutes |
| 27 | Weight | 373.4 | lbm |
| 28 | Leakage | 149.3 | PPH |
| | **Calculated Data** | | |
| 29 | | | |
| 30 | Vessel Pressure | 139.3 | psia |
| 31 | Enthalpy, calorimeter | 1,189.7 | BTU/lbm |
| 32 | Saturation Temp., Vessel | 352.6 | °F |
| 33 | Saturation Volume, Vessel | 3.2364 | $ft^3$/lbm |
| 34 | Steam Quality, Vessel | 99.6 | % |
| 35 | Vessel Temp. (Theoretical) | 352.6 | °F |
| 36 | Vessel Volume | 3.2233 | $ft^3$/lbm |
| 37 | Degrees Superheat | N/A | °F |
| 38 | Capacity Correction | 0.9980 | |
| 39 | **Measured Capacity** | **5739.0** | PPH |
| 40 | Slope | 41.213 | PPH/PSIA |
| 41 | Coefficient | 0.91544 | |
| 42 | Rated Capacity For Measured Set | N/A | PPH |
| 43 | | | |
| 44 | | | $in^2$ |

# National Board Testing Laboratory
## Steam Test - Timed Weight Method: Test Summary

**Test Summary for test 51081S:** V:\apps\Labview Programs\DATA\Steam Tests\"S.xls

1. Valve tested for Scope Change as a Manufacturer.
2. Measured slope = 41.2 PPH/psia. -5% slope from original provisional testing = 40.2 PPH/psia. Slope is within acceptance band.

I certify that the data on the attached test data sheets was obtained under my supervision in accordance with the provisions of ASME PTC 25, the applicable sections of the ASME Boiler and Pressure Vessel Code, and the National Board Testing Laboratory Quality Control Manual. To the best of my knowledge and belief the objects tested were of the same type and design as indicated.

Authorized Observer: Robert Viers

Date 1/7/2020

Test Personnel

Robert Viers
Steve Bowman

Company Representatives