

APPLICATION FOR APPROVAL OF VALVES AND FITTINGS

Applicant Union Tank Car Company AAR No. E-137038

Description of Device 2" Excess Flow Check Valve

Applicant No. 505118 Device Ident. No. 2" UEFCV Date 07/26/2013

1. Manufacturer McKenzie Valve and Machining LLC
 Address 145 Airport Road City McKenzie State TN Zip 38201
 2. Test facility MV&M and CEESI Address 145 Airport Road
 3. Test date 07/08/2013, 6/10/2013 4. Observer Donald Prince
TEST PROCEDURE: 5. Weight or mass of device 13.37 lb. (6.1 kg)

6. Description of prototype testing: 3 Valves were hydro tested at 1.5 x CWP, 3 Valves were flow tested

7. Description of production testing: 100% shell test at 80-100 psig

8. Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
_____	_____ °F _____ °C	_____ psi _____ kPa	_____	_____ °F _____ °C	_____ psi _____ kPa	_____	_____
Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
_____	_____ °F _____ °C	_____ psi _____ kPa	_____	_____ °F _____ °C	_____ psi _____ kPa	_____	_____

9. Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
<u>N/A</u>	<u>70</u> °F	<u>750</u> psi	<u>N/A</u>	<u>70</u> °F	<u>750</u> psi	<u>water</u>	<u>Hydrostatic Test at 750 psig</u>
<u>3 valves</u>	<u>21</u> °C	<u>5,171</u> kPa	<u>3 valves</u>	<u>21</u> °C	<u>5,171</u> kPa	_____	_____
Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
_____	_____ °F _____ °C	_____ psi _____ kPa	_____	_____ °F _____ °C	_____ psi _____ kPa	_____	_____

10. Initial commodity (or commodity type) _____ * 11. Flow rate (if applicable) Maximum 82 water gpm (310 L/min)
@ 27.8 ΔPSI


Applicable drawings	Material	Drawing Number latest revision	Precedent	
			Drawing Number	Application/Certificate
12. Device application				
13. Device assembly	<u>CS</u>	<u>505118</u>		<u>Submitted</u>
14. Device details				

15. Quality control statement: Manufacturer is M1003 certified and maintains a rigid quality control program to verify that all required specifications and tests are adhered to.


*Approval is sought for use with all nonregulated and regulated commodities which are compatible with use of top fittings.

REVISIONS:

CERTIFICATION: The above data is correct and conforms with AAR Specifications for Tank Cars, Appendix A. The devices tested conform with drawings listed above.

By: Donald Prince  7/26/13 7/26/13 Title: Chief Product Engineer - Valves

APPROVAL AAR Tank Car Committee

Date Approved SEP 02 2014 
 (Signature) on behalf of Tank Car Committee

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