

APPLICATION FOR APPROVAL OF VALVES AND FITTINGS

Applicant MIDLAND MFG. AAR No. E102010
 Description of Device 2" ANGLE VALVE

Applicant No. _____ Device Ident. No. A-728-DI, A-728-CS, A-728-SS Date 9/3/10

1. Manufacturer MIDLAND MFG.
 Address 7733 GROSS POINT ROAD City SKOKIE State IL Zip 60077
 2. Test facility MIDLAND MFG. Address _____
 3. Test date 3/10 4. Observer LES WILCZEK

TEST PROCEDURE: 5. Weight or mass of device 25-30 lb. (_____ kg)

6. Description of prototype testing: BODY AND SEAT TESTS ON ASSEMBLY AT 500 PSI AND FLOW SIMULATION UTILIZING COMPUTATIONAL FLUID DYNAMICS (CFD).

7. Description of production testing: FUNCTIONAL PERFORMANCE TEST AND 100% PRESSURE TESTING AT 500 PSI OF SEAT SEAL, PACKING AND CASTINGS.

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

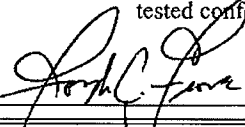
10. Initial commodity (or commodity type) ANHYDROUS AMMONIA 11. Flow rate (if applicable) _____ gpm (_____ L/min)

Applicable drawings	Material	Drawing Number latest revision	Precedent	
			Drawing Number	Application/Certificate
12. Device application	*SEE DRAWINGS*	A-728-DI, A-728-CS		
13. Device assembly		AND A-728-SS.		
14. Device details				

15. Quality control statement: ISO 9000 CERTIFIED AND A REGISTERED CLASS F FACILITY. MIDLAND HAS RIGID QUALITY CONTROL PROCEDURES TO ENSURE THAT ALL TESTS AND MANUFACTURING SPECIFICATIONS ARE MET.

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  Title: Global Director, ENGINEERING

APPROVAL AAR Tank Car Committee

Date Approved JAN 31 2011

 (Signature) on behalf of Tank Car Committee