

APPLICATION FOR APPROVAL OF VALVES AND FITTINGS

Applicant MIDLAND MANUFACTURING CORP. AAR No. E102011
 Description of Device 3" CHECK VALVE

Applicant No. _____ Device Ident. No. A-183-SS, A-183-CS Date 9-3-2010

1. Manufacturer MIDLAND MANUFACTURING CORP
 Address 7733 GROSS POINT ROAD City SKOKIE State IL Zip 60077
 2. Test facility MIDLAND MANUFACTURING Address SKOKIE, IL
 3. Test date 3/2010 4. Observer LESTER WILCZEK

- TEST PROCEDURE:**
 5. Weight or mass of device 17 lb. (kg)
 6. Description of prototype testing: BODY AND SEAT TEST ON ASSEMBLY AT 500 PSI. FLOW SIMULATION UTILIZING COMPUTATIONAL FLUID DYNAMICS (CFD). FUNCTIONAL PERFORMANCE TEST.
 7. Description of production testing: 100% PRESSURE TESTING AT 500 PSI OF SEAT SEAL AND BODY CASTING

8. Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
_____	_____°F _____°C	_____psi _____kPa	_____	_____°F _____°C	_____psi _____kPa	_____	_____
_____	_____°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	_____	_____
_____	_____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				
13. Device assembly	STAINLESS STEEL	A-183 REV A		
14. Device details				

15. Quality control statement: MIDLAND MANUFACTURING IS CERTIFIED ISO 9000 AND 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 *[Signature]* Title GLOBAL DIRECTOR, ENGINEERING

APPROVAL AAR Tank Car Committee

Date Approved JAN 31 2011

[Signature]
 (Signature) on behalf of Tank Car Committee