APPLICATION FOR APPROVAL OF VALVES AND FITTINGS

Applicant HEROSE GmbH AAR No. E139503
Description of Device CRYOGENIC GLOBE VALVE
DN 10 (3/8") TO DN 150 (6")
Applicant No. _____ Device Ident. No. 01341 Date 2013-02-05

1. Manufacturer HEROSE GmbH
   Address ELLY-HEUSS-KNAPP-STR. 12 City BAD OLDESLOE State GERMANY Zip 23843
2. Test facility TÜV NORD SYSTEMS GmbH Address Große Bahnstraße 31, 22525 Hamburg
3. Test date 2013-8-16 4. Observer S. KORN

TEST PROCEDURE:

5. Weight or mass of device 3.11 - 11.9 lb. (1.4 - 5.4 kg)
6. Description of prototype testing: acc. to DIN EN 1626 and DIN EN 12567
7. Description of production testing: hydrostatic test 1.5 x PN* (see catalogue) and Leak tightness test acc. to DIN EN 12266

8. Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
2000	-320 °F	725 psi		+248 °F	psi	Liquid	
	-196 °C	5000 kPa		+120 °C	kPa	nitrogen	
Cycles	Min. Temp.	@ Pressure	Cycles	Max. Temp.	@ Pressure	Test Medium	Remarks
	°F	psi		°F	psi		
	°C	kPa		°C	kPa		

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

10. Initial commodity (or commodity type) cryogenic liquified gas LNG, ETHYLEN 11. Flow rate (if applicable) Not applicable gpm (_____ L/min)

Applicable drawings	Material	Drawing Number latest revision	Precedent	
			Drawing Number	Application/Certificate
12. Device application				
13. Device assembly	stainless steel	0134X-X-00XX		
14. Device details				

15. Quality control statement: According to PED 97/23/EC DIN EN ISO 9001:2008

REVISIONS: 1

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 MARC ZAURITZER Title QUALITY MANAGEMENT

APPROVAL AAR Tank Car Committee

Date Approved APR 04 2014

Kenneth D Dorsey
(Signature) on behalf of Tank Car Committee

Form AAR 4-5 Revised 12/1/2000

Subject to AAR Service Trial No._____

* pressure nominal DN 10 - DN 80 -> PN 50
DN 100 -> PN 40
DN 150 -> PN 25

1.5 x PN 50 =>