



FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120315-BV001
Ref. Test Report No.: SWI-FBV-Ferritic-1-1/2"-150#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	ANB-11S3R4A-R211
Type of Test Valve	Series "AN" Floating Ball Valve
Description of Test Valve	2pcs Body, Full Bore, Flanged
Valve Size (NPS)	NPS 1-1/2
Pressure Rating (ANSI Class)	150#
Valve Body Material	ASTM A105N
Valve Seat Material	RTFE
Date of Test	January 28, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	1-1/2" and below
Qualified Pressure Ratings (ANSI Class)	#150, #300
Qualified Valve Material	Ferritic

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120315-BV017
Ref. Test Report No.: SWI-CBV-Ferritic-4"-150#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CNB-11S3R4C-R212
Type of Test Valve	Series "CN" Floating Ball Valve
Description of Test Valve	2pcs Body, Full Bore, Flanged
Valve Size (NPS)	NPS 4
Pressure Rating (ANSI Class)	150#
Valve Body Material	ASTM A216 WCB
Valve Seat Material	RTFE
Date of Test	January 29, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	4", 5", 6", 8"
Qualified Pressure Ratings (ANSI Class)	#150, #300
Qualified Valve Material	Ferritic

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120315-BV045
Ref. Test Report No.: SWI-FBV-Ferritic-2"-1500#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CTH-11S3R2-R213
Type of Test Valve	Series "CT" Trunnion Ball Valve
Description of Test Valve	3pcs Body, Full Bore, Flange
Valve Size (NPS)	NPS 2
Pressure Rating (ANSI Class)	1500#
Valve Body Material	ASTM A105N
Valve Seat Material	RTFE
Date of Test	March 03, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	2" and below, 2-1/2", 3", 4"
Qualified Pressure Ratings (ANSI Class)	#1500, #2500
Qualified Valve Material	Ferritic

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120315-BV041
Ref. Test Report No.: SWI-FBV-Ferritic-8"-600#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CTE-11S3R2-R213
Type of Test Valve	Series "CT" Trunnion Ball Valve
Description of Test Valve	3pcs Body, Full Bore, Flanged
Valve Size (NPS)	NPS 8
Pressure Rating (ANSI Class)	600#
Valve Body Material	ASTM A105N
Valve Seat Material	RTFE
Date of Test	February 28, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	8" and Above
Qualified Pressure Ratings (ANSI Class)	#600, #800, #900
Qualified Valve Material	Ferritic

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120425-BV112
Ref. Test Report No.: SWI-FBV-Stainless-2"-1500#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CTH-23S3R2-R213
Type of Test Valve	Series "CT" Trunnion Ball Valve
Description of Test Valve	3pcs Body, Full Bore, Flange
Valve Size (NPS)	NPS 2
Pressure Rating (ANSI Class)	1500#
Valve Body Material	ASTM A182-F316
Valve Seat Material	RTFE
Date of Test	April 13, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	2" and below, 2-1/2", 3", 4"
Qualified Pressure Ratings (ANSI Class)	#1500, #2500
Qualified Valve Material	Austenite

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120425-BV107
Ref. Test Report No.: SWI-RBV-Stainless-8"-600#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CTE-23S3R2-R213
Type of Test Valve	Series "CT" Trunnion Ball Valve
Description of Test Valve	3pcs Body, Reduced Bore, Flange
Valve Size (NPS)	NPS 8
Pressure Rating (ANSI Class)	600#
Valve Body Material	ASTM A182-F316
Valve Seat Material	RTFE
Date of Test	April 11, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	8" and Above
Qualified Pressure Ratings (ANSI Class)	#600, #800, #900
Qualified Valve Material	Austenite

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120525-BV160

Ref. Test Report No.: SWI-FBV- Duplex -2"-1500#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CTH-29D1R2-R213
Type of Test Valve	Series "CT" Trunnion Ball Valve
Description of Test Valve	3pcs Body, Full Bore, Flange
Valve Size (NPS)	NPS 2
Pressure Rating (ANSI Class)	1500#
Valve Body Material	ASTM A182-F51
Valve Seat Material	RTFE
Date of Test	May 17, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	2" and below, 2-1/2", 3", 4"
Qualified Pressure Ratings (ANSI Class)	#1500, #2500
Qualified Valve Material	Duplex

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.





FIRE TEST CERTIFICATE

Certification No. : FTC-SWI-20120525-BV157
Ref. Test Report No.: SWI-RBV-Duplex-8"-600#-01

This is to certify that the below materials have been inspected by Velosi Korea and found to be satisfactory in the Fire Test in accordance with API 607, sixth edition / EN ISO 10497 : 2010.

Manufacturer : **SWI VALVE CO., LTD.**
Location : 1) 1023-2, Kwanyang-dong, Anyang city, Gyeonggi-do, Korea
 2) 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea
Location of Test : 801-2, Goryeom-ri, Cheongbuk-myeon, Pyeongtack-si, Gyeonggi-do, Korea

1. Description of Test Valve :

Valve Model No.	CTE-29D1R2-R213
Type of Test Valve	Series "CT" Trunnion Ball Valve
Description of Test Valve	3pcs Body, Reduced Bore, Flange
Valve Size (NPS)	NPS 8
Pressure Rating (ANSI Class)	600#
Valve Body Material	ASTM A182-F51
Valve Seat Material	RTFE
Date of Test	May 16, 2012

2. Qualified Range of Valve :

Qualified Sizes (NPS)	8" and Above
Qualified Pressure Ratings (ANSI Class)	#600, #800, #900
Qualified Valve Material	Duplex

This certificate is issued in accordance with API 607, 6th edition / EN ISO 10497 : 2010(E), based on the result of test report on above mentioned test valve. For detailed reports of tested valve, see the Appendix 1 of this certificate. The additional valve qualification shall be limited on the valves according to para.7 requirements.

