

INTERMIXABILITY & INTERCHANGEABILITY TEST-BURST TEST CERTIFICATE

Date : Apr. 01, 2010

Applicant / Manufacturer : BMT Co., Ltd., Korea.
Date and Place of Test : Feb. 17, 2010 at the manufacturer's premises in Yangsan, Korea
Kind of Test : Witness of Intermixability & Interchangeability Test-Burst Test
Test Fitting : **SUPERLOK & SWAGELOK Twin-Ferrule Fitting**
 - Size : 1/2", 316 Stainless Steel
 - Tube : 12.7mm O.D. X 1.24mm WT Seamless Tube

Test condition :
 - Test Medium : Water
 - Test Temperature : Room Temperature
 - Configuration of Test Piece

- SU : Superlok, -SW:Swagelok

Test 1	Nut	Back Ferrule	Front Ferrule	Body
1-1	SU	SU	SW	SW
1-2	SW	SW	SU	SU
1-3	SW	SU	SW	SU
1-4	SU	SW	SU	SW

Burst Pressure : 15000 PSI at Connection Tube

** ** ** **

This is to certify that the Intermixability & Interchangeability Test-Burst Test was performed by the manufacturer under our witness as above, and we confirmed the Burst Pressure of 15000 PSI at Connection Tube.

Note
 The details of the test condition and data are as per **Manufacturer's Technical Test Report No. BMT-TR100217**, Which were verified and endorsed by us.

** ** ** **

"In accordance with Client's instructions, the Company's involvement has been limited to witnessing/observing a third party's intervention(s) at the third party's laboratory/test house or other facilities and installations used for the intervention(s). The Company's sole responsibility was to be present at the time of the third party's intervention(s) to forward the results, or confirm the occurrence, of the intervention(s). The Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied the qualifications, actions or omissions of the third party's personnel or the analysis results.

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SHJ/bil

SGS Korea Co., Ltd.

S. H. Chun

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 Manager, Industrial Division



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Date and Place of Test : Feb. 17, 2010 at the manufacturer's premises in Yangsan, Korea
Kind of Test : Witness of Intermixability & Interchangeability Test-Burst Test
Test Fitting : **SUPERLOK & Parker A-LOK Twin-Ferrule Fitting**
 - Size : 1/2", 316 Stainless Steel
 - Tube : 12.7mm O.D. X 1.24mm WT Seamless Tube

Test condition :
 - Test Medium : Water
 - Test Temperature : Room Temperature
 - Configuration of Test Piece

- SU : Superlok, - A : Parker A-Lok

Test 1	Nut	Back Ferrule	Front Ferrule	Body
1-1	SU	SU	A	A
1-2	A	A	SU	SU
1-3	A	SU	A	SU
1-4	SU	A	SU	A

Burst Pressure : 15000 PSI at Connection Tube

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S. H. Chun
 Manager, Industrial Division



SHJ/bil

INTERMIXABILITY & INTERCHANGEABILITY TEST-BURST TEST CERTIFICATE

Date : Apr. 01, 2010

Applicant / Manufacturer : BMT Co., Ltd., Korea.
Date and Place of Test : Mar. 19, 2010 at the manufacturer's premises in Yangsan, Korea
Kind of Test : Witness of Intermixability & Interchangeability Test-Burst Test
Test Fitting : **SUPERLOK & BI-LOK Twin-Ferrule Fitting**
 - Size : 1/2", 316 Stainless Steel
 - Tube : 12.7mm O.D. X 1.24mm WT Seamless Tube

Test condition :
 - Test Medium : Water
 - Test Temperature : Room Temperature
 - Configuration of Test Piece

- SU : Superlok, - BI : BI-Lok

Test 1	Nut	Back Ferrule	Front Ferrule	Body
1-1	SU	SU	BI	BI
1-2	BI	BI	SU	SU
1-3	BI	SU	BI	SU
1-4	SU	BI	SU	BI

Burst Pressure : 15000 PSI at Connection Tube

** ** ** **

This is to certify that the Intermixability & Interchangeability Test-Burst Test was performed by the manufacturer under our witness as above, and we confirmed the Burst Pressure of 15000 PSI at Connection Tube.

Note

The details of the test condition and data are as per **Manufacturer's Technical Test Report No. BMT-TR100319**, Which were verified and endorsed by us.

** ** ** **

"In accordance with Client's instructions, the Company's involvement has been limited to witnessing/observing a third party's intervention(s) at the third party's laboratory/test house or other facilities and installations used for the intervention(s). The Company's sole responsibility was to be present at the time of the third party's intervention(s) to forward the results, or confirm the occurrence, of the intervention(s). The Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied the qualifications, actions or omissions of the third party's personnel or the analysis results.

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S. H. Chun
 Manager, Industrial Division



SHJ/bil

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Date : Apr. 01, 2010

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Date and Place of Test : Mar. 19, 2010 at the manufacturer's premises in Yangsan, Korea
Kind of Test : Witness of Intermixability & Interchangeability Test-Burst Test
Test Fitting : **SUPERLOK & LET-LOK Twin-Ferrule Fitting**
 - Size : 1/2", 316 Stainless Steel
 - Tube : 12.7mm O.D. X 1.24mm WT Seamless Tube

Test condition :
 - Test Medium : Water
 - Test Temperature : Room Temperature
 - Configuration of Test Piece

- SU : Superlok, - LET : LET-Lok

Test 1	Nut	Back Ferrule	Front Ferrule	Body
1-1	SU	SU	LET	LET
1-2	LET	LET	SU	SU
1-3	LET	SU	LET	SU
1-4	SU	LET	SU	LET

Burst Pressure : 16000 PSI at Connection Tube

** ** ** **

This is to certify that the Intermixability & Interchangeability Test-Burst Test was performed by the manufacturer under our witness as above, and we confirmed the Burst Pressure of 16000 PSI at Connection Tube.

Note

The details of the test condition and data are as per **Manufacturer's Technical Test Report No. BMT-TR100319**, Which were verified and endorsed by us.

** ** ** **

"In accordance with Client's instructions, the Company's involvement has been limited to witnessing/observing a third party's intervention(s) at the third party's laboratory/test house or other facilities and installations used for the intervention(s). The Company's sole responsibility was to be present at the time of the third party's intervention(s) to forward the results, or confirm the occurrence, of the intervention(s). The Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied the qualifications, actions or omissions of the third party's personnel or the analysis results.

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SGS Korea Co., Ltd.

(Handwritten Signature)

S. H. Chun
Manager, Industrial Division



SHJ/bil



Technical Test Report

BMT CO., LTD.
1617-7, Songjeong-Dong
Gangseo-Gu Busan, Korea

No. : BMT-TR100217
DATE : 2010.02.17
Page : 1 / 4
작성 : 기술부 서 호 필

1. Title

- Intermixability & Interchangeability Test - Burst Test

2. Product Tested

- Product : SUPERLOK & SWAGELOK twin-ferrule fitting
: SUPERLOK & Parker A-LOK twin-ferrule fitting
- Size : 1/2"
- Tube : O.D12.7mm x 1.24mmWT Seamless Tube
- Material : 316 Stainless Steel

3. Test Conditions

- Medium : Water
- Temperature : Room Temperature

- Configurations of test pieces are laid out in the table below;

Test 1 : SUPERLOK and SWAGELOK

-SU: SUPERLOK

-SW: SWAGELOK

Test 1	Nut	Back Ferrule	Front Ferrule	Body
1-1	SU	SU	SW	SW
1-2	SW	SW	SU	SU
1-3	SW	SU	SW	SU
1-4	SU	SW	SU	SW

Test 2 : SUPERLOK and Parker A-LOK

-SU: SUPERLOK

-A: Parker A-LOK

Test 2	Nut	Back Ferrule	Front Ferrule	Body
2-1	SU	SU	A	A
2-2	A	A	SU	SU
2-3	A	SU	A	SU
2-4	SU	A	SU	A

SUPERLOK[®]

Technical Test Report

BMT CO., LTD.
1617-7, Songjeong-Dong
Gangseo-Gu Busan, Korea

No. : BMT-TR100217

DATE : 2010.02.17

Page : 2 / 4

작성 : 기술부 서 호 필

4. Test Procedure

- ① The configuration of test pieces were set up as laid out on the following page.
- ② Connections to test equipment were 1/2"NPT male.
- ③ Complete test pieces were pressured to tube burst.

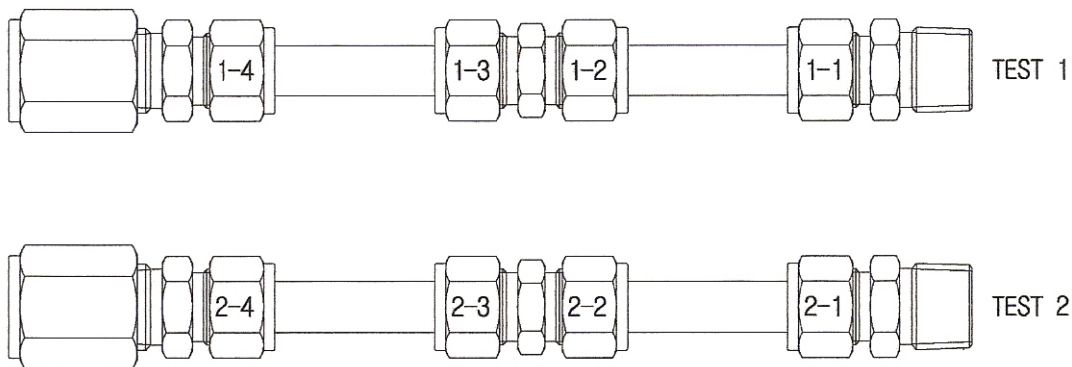


Fig.1) Test Piece Configuration

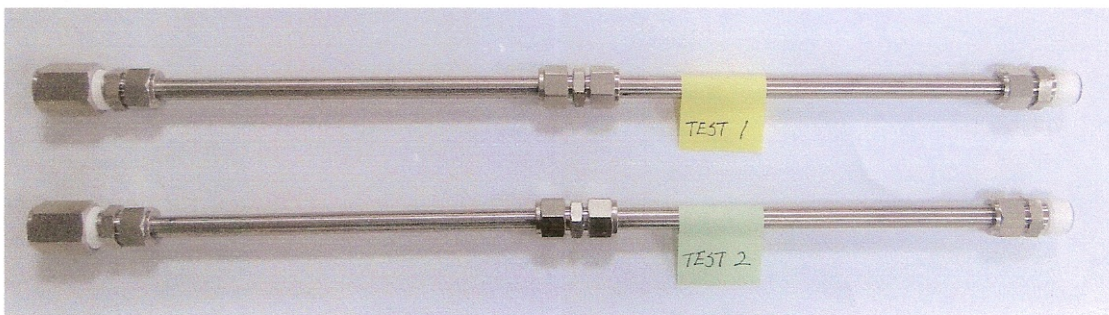


Fig.2) Photograph of above configuration

SUPERLOK[®] Technical Test Report

BMT CO., LTD.
1617-7 , Songjeong-Dong
Gangseo-Gu Busan, Korea

No. : BMT-TR100217

DATE : 2010.02.17

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작성 : 기술부 서 호 필

5. Test Result

1) TEST 1

- Intermixed fittings' combinations according to test configuration TEST 1 have not shown any leakage.
- Burst pressure was approx. 1,5000 psi.

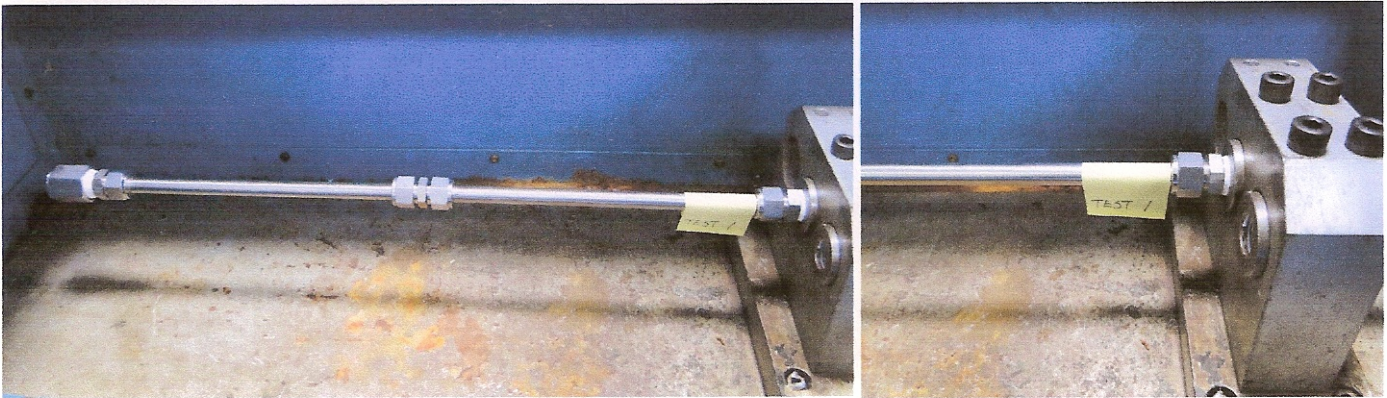


Fig.3) Test 1 Set-up

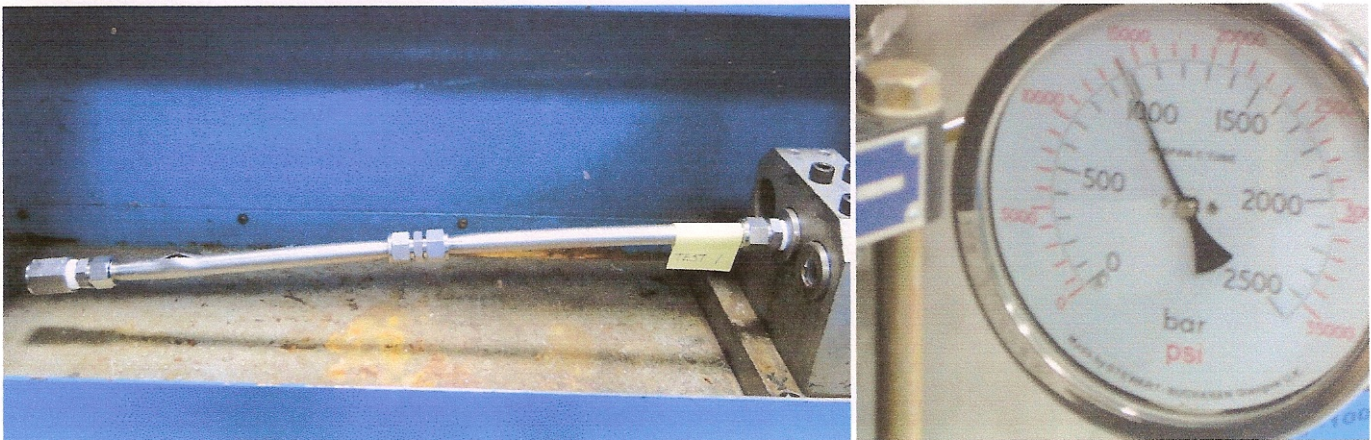


Fig.4) Test 1 Burst tube

Fig.5) Approx. Burst Pressure

Technical Test Report

BMT CO., LTD.
 1617-7 , Songjeong-Dong
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No. : BMT-TR100217
 DATE : 2010.02.17
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 작성 : 기술부 서 호 필

2) TEST 2

- Intermixed fittings' combinations according to test configuration TEST 2 have not shown any leakage.
- Burst pressure was approx. 15,000 psi.

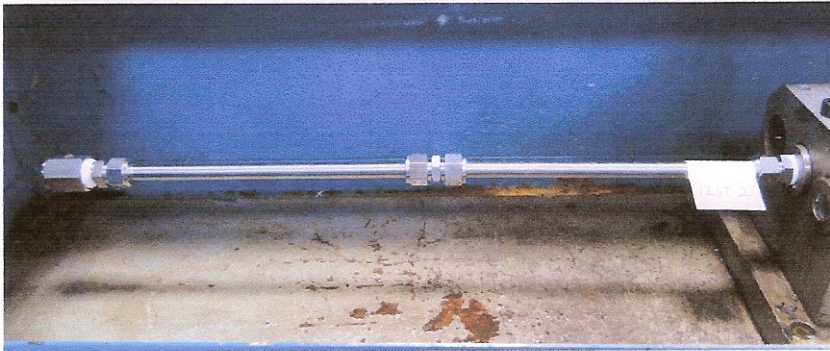


Fig.6) Test 2 Set-up

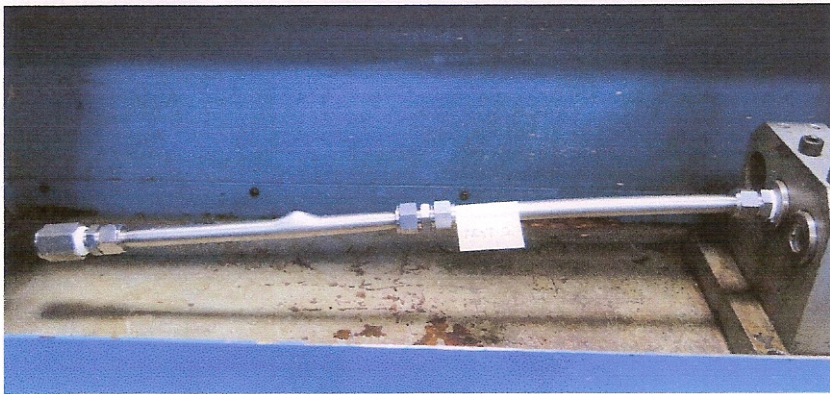
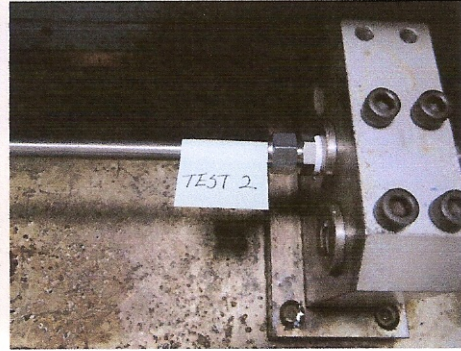


Fig.7) Test 2 Burst tube



Fig.8) Approx. Burst Pressure

- Burst tests show the safe intermixability & interchangeability of SUPERLOK twin-ferrule fitting with SWAGELOK & Parker A-LOK. Different combinations of intermixed components of above-mentioned twin ferrule fittings manufacturers do not show any leakage. The tube is the weak element and burst in both tests.

BMT CO., LTD Here by certify that the contents of this test report are correct and accurate performed by us in compliance with the applicable specification.

(주)비엠티는 시험보고서의 내용이 적용요건에 따라 정확하게 시행되었음을 보증합니다.



담 당	검 토	승 인
