

TESTREPORT

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Report Number

SZMF-ED-PB-2010-0090

Report Title

**Hydrostatic pressure burst tests on four welded pipe components
and assemblies**

Date

03/11/2010

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Distribution list Print-Version

MAWO-Pipefittings GmbH
2 copies

Distribution list PDF-Version

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Keywords

MAWO-Pipefittings GmbH
Order no. 31082

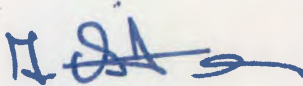
Accreditation and Certification note

Investigations written in this report to the topics of Development of Materials, Materials Science, Stress Rupture Tests, Preparation of Sample, Method of Mechanical-Technological Test, Heat Treatment, and as well as Corrosion and Corrosion Protection were carried out in the SZMF laboratories, which are accredited by the "Deutscher Akkreditierungsrat" (German Accreditation Council) according to ISO/IEC 17025:2005.

Investigations presented in this report with respect to Eddy Current Testing, Flux Leakage Testing, Magnetic Particle Testing, Penetrant Testing, Radiographic Testing, Ultrasonic Testing were carried out by or supervised by Testing Personnel certified according to EN 473 level 3 and/or having an employer certificate according to SNT-TC-1A level III.

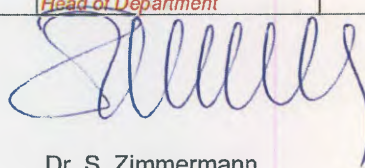
Results / Summary

Signatures Authors



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1. Introduction

Order from: MAWO - Pipefittings GmbH
Wiesenstrasse 51
40549 Düsseldorf

Object: 4 welded pipe specimens

Manufactured serial no.:

Specimen no. 1: 3" XS / 2" XS
Specimen no. 2: 4" XS / 3" XS
Specimen no. 3: 6" XS / 4" XS
Specimen no. 4: 10" XS / 6" XS

SZMF-Order no.:

F4 10 014 01
F4 10 014 02
F4 10 014 03
F4 10 014 04

Reference: Order placed by MAWO - Pipefittings GmbH,
dated 2010-02-09
Order no.: 31082
Job no.: 290209

Contract details: Hydrostatic burst test and technical documentation

Hydrostatic pressure burst tests on four welded pipe components and assemblies

2 Test Results

2.1 Data reported by the client:

Certification reports (Appendix 1 to 4)

2.2 Results of burst tests

(pressurising fluid: inhibited water)

Specimen no.		3" XS / 2" XS (Figure 1)	4" XS / 3" XS (Figure 3)
SZMF – Order no.		F4 10 014 01	F4 10 014 02
Burst pressure	in bar	951,3	858,2
Volumetric increase	in litres	0,558	0,554
Location of fracture		(Figure 2)	(Figure 4)

Specimen no.		6" XS / 4" XS (Figure 5)	10" XS / 6" XS (Figure 7)
SZMF – Order no.		F4 10 014 03	F4 10 014 04
Burst pressure	in bar	661,9	393,3
Volumetric increase	in litres	3,727	9,568
Location of fracture		(Figure 6)	(Figure 8)

All experiments were followed by Mr. Wenke from TÜV Rheinland Industries Service GmbH – Düsseldorf.

Appendix

Certification reports

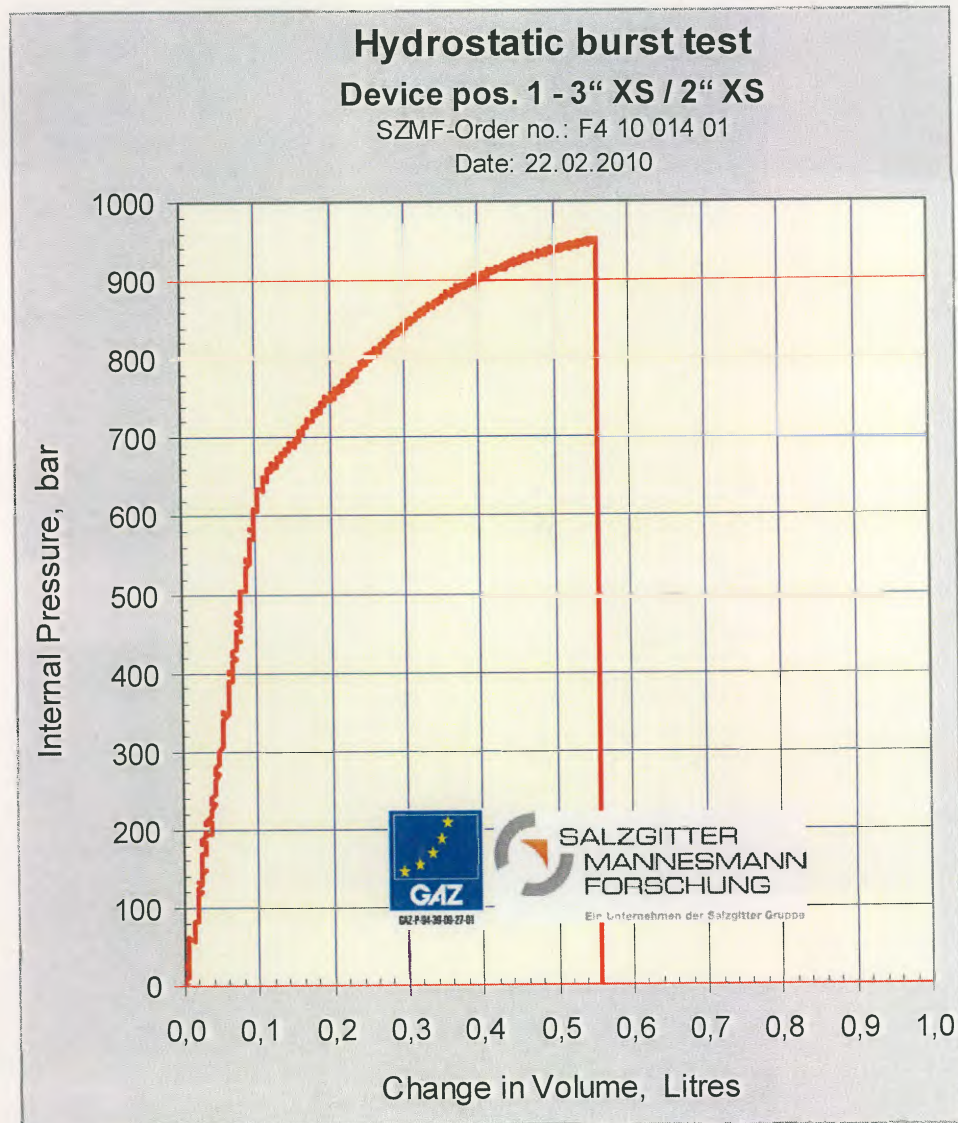


Figure 1: Internal pressure vs. Volume diagram of burst test on specimen no. 1 – 3" XS / 2" XS

(SZMF-Order no.: F4 10 014 01)

Hydrostatic pressure burst tests on four welded pipe components and assemblies

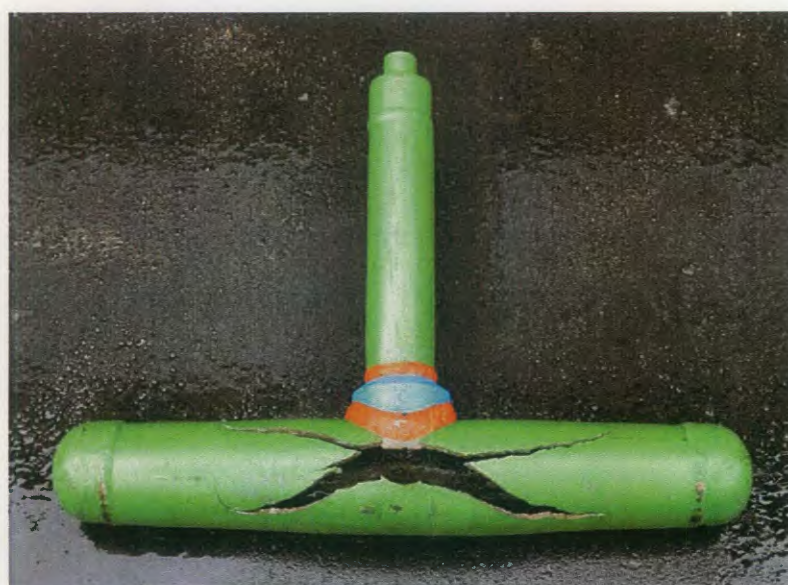


Figure 2: Specimen no.1 – 3" XS / 2" XS before and after burst test

(SZMF-Order no.: F4 10 014 01)

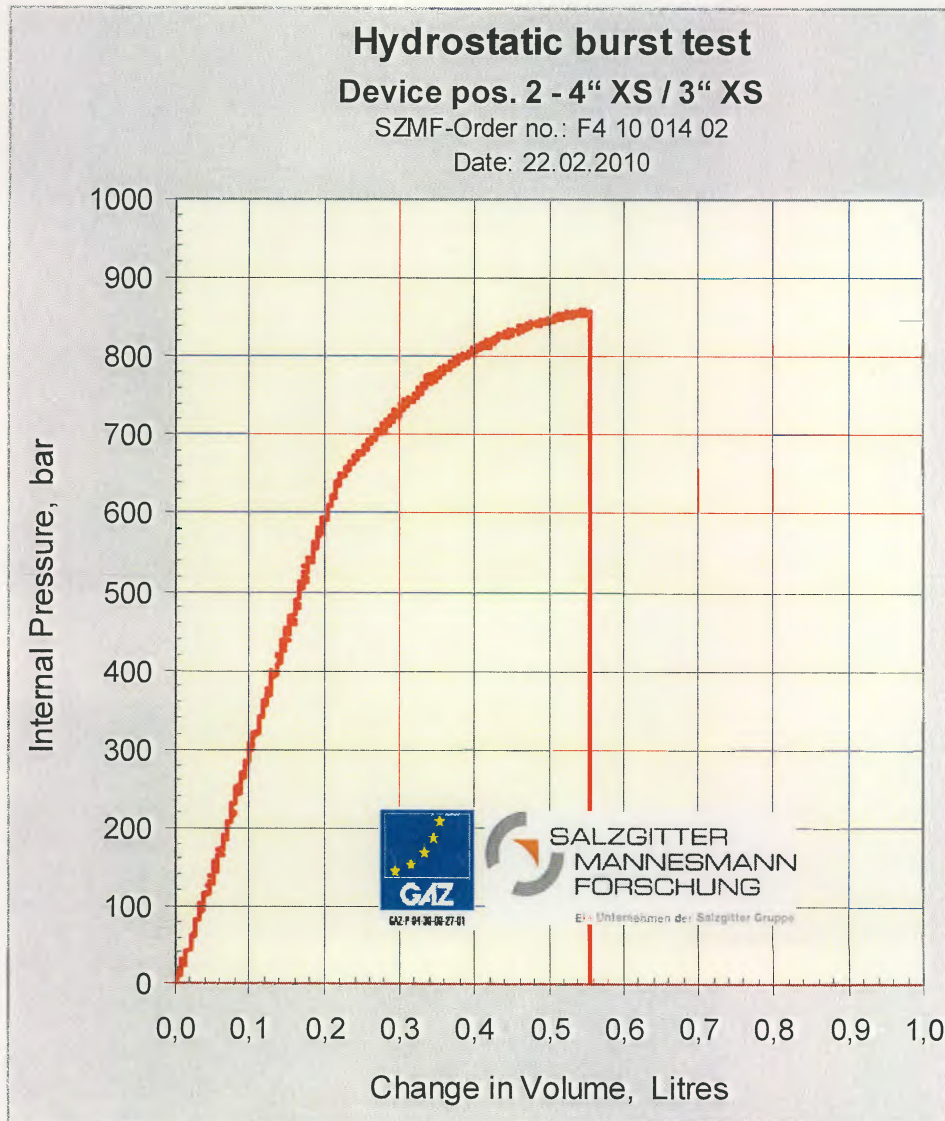


Figure 3: Internal pressure vs. Volume diagram of burst test on specimen no.2 – 4" XS / 3" XS

(SZMF-Order no.: F4 10 014 02)

Hydrostatic pressure burst tests on four welded pipe components and assemblies

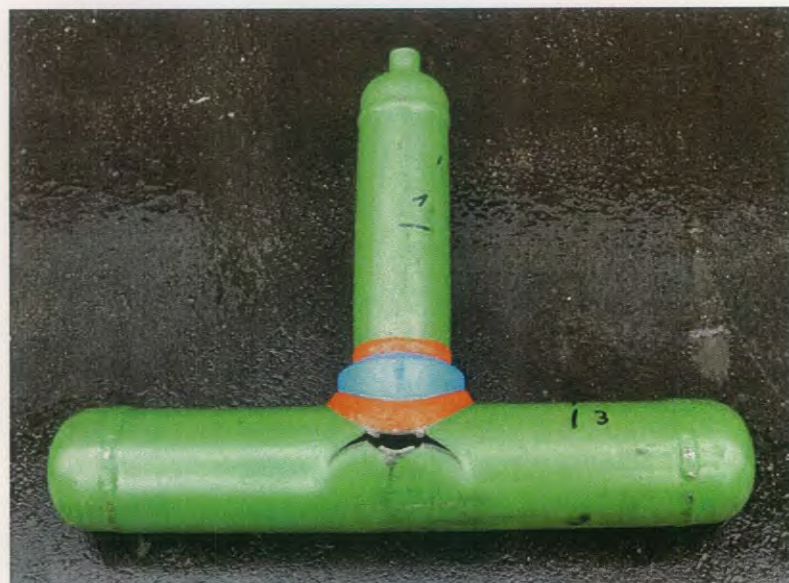


Figure 4: Specimen no.2 – 4" XS / 3" XS before and after burst test

(SZMF-Order no.: F4 10 014 02)

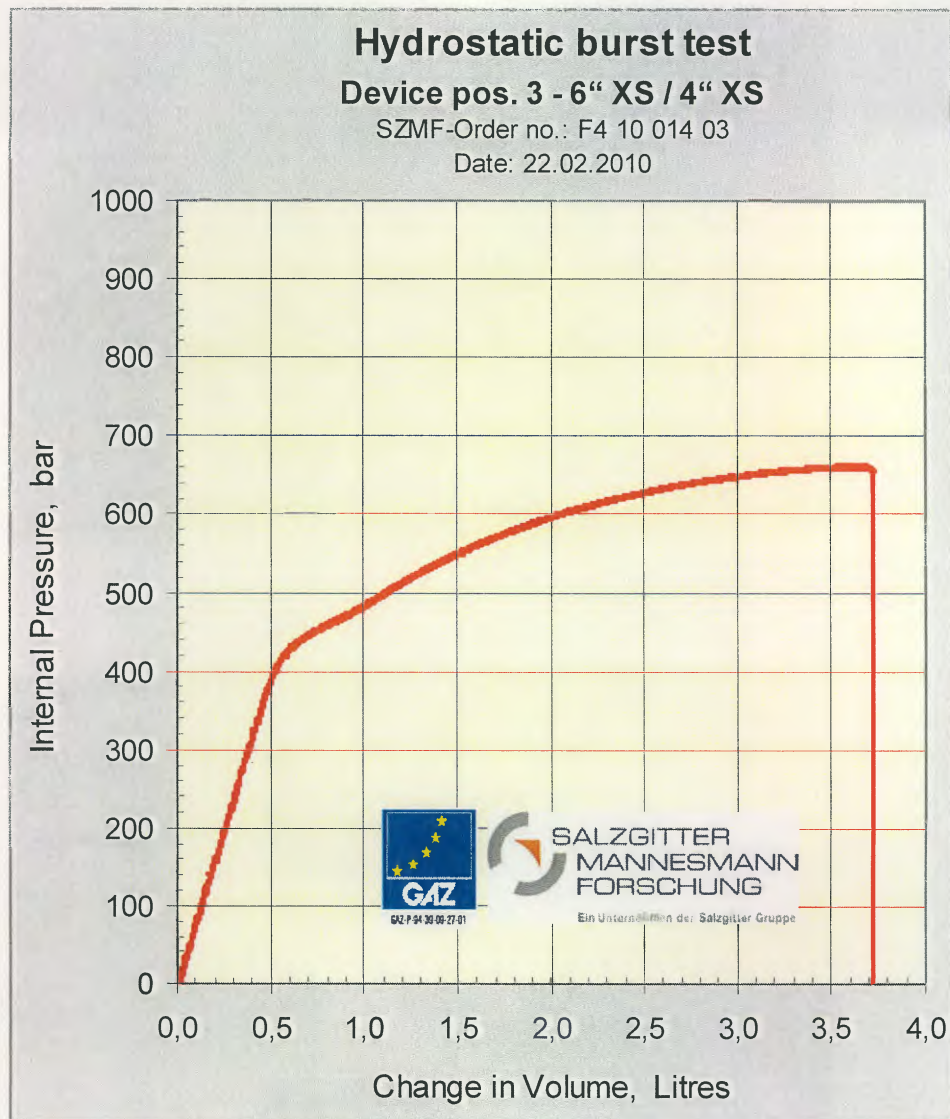


Figure 5: Internal pressure vs. Volume diagram of burst test on specimen no.3 – 6" XS / 4" XS

(SZMF-Order no.: F4 10 014 03)

Hydrostatic pressure burst tests on four welded pipe components and assemblies

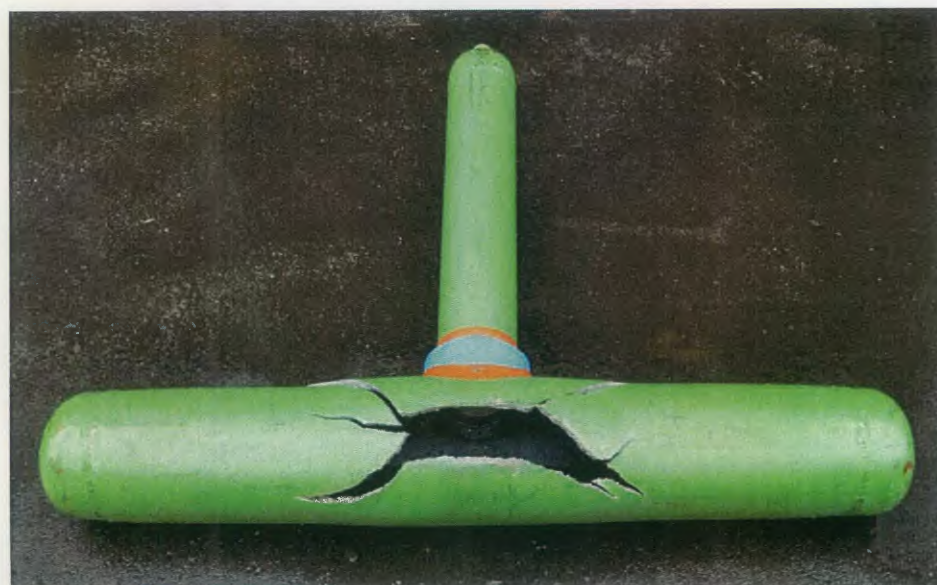


Figure 6: Specimen no.3 – 6" XS / 4" XS before and after burst test

(SZMF-Order no.: F4 10 013 03)

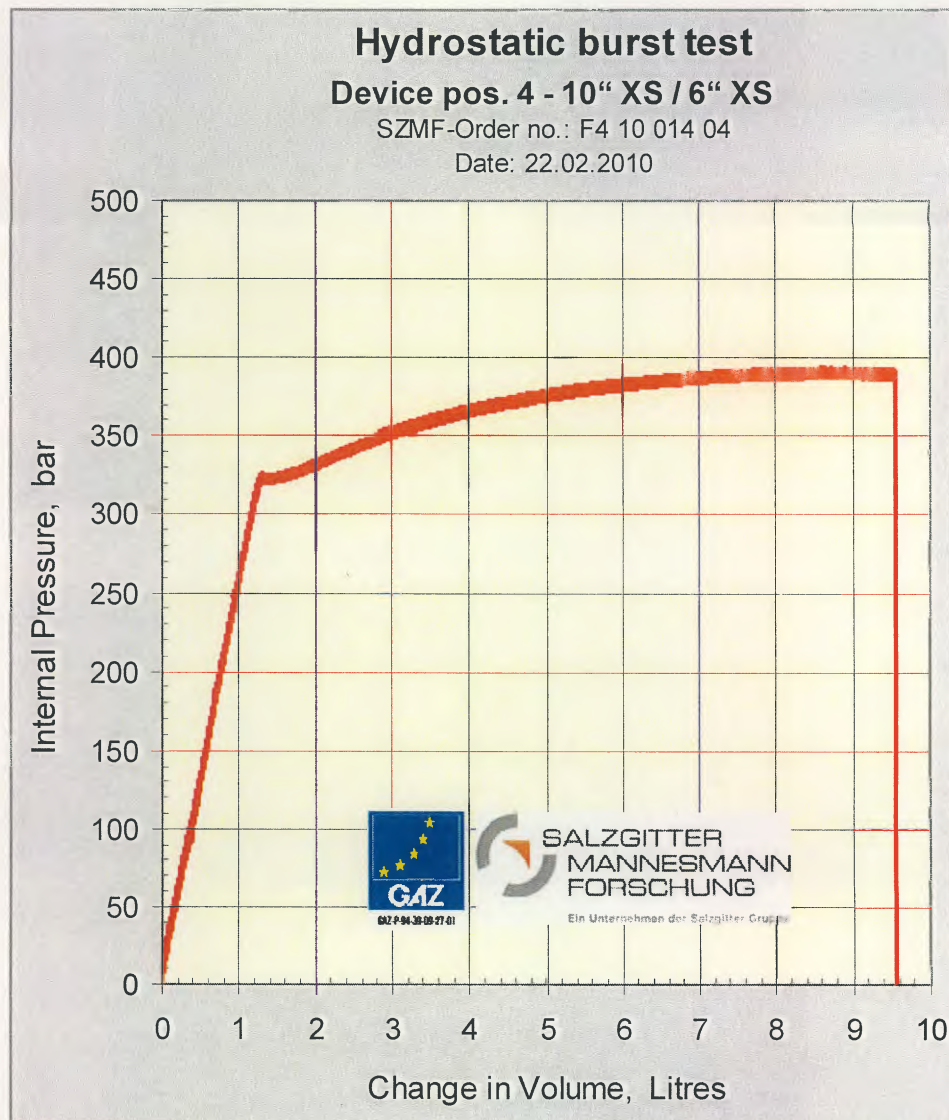


Figure 7: Internal pressure vs. Volume diagram of burst test on specimen no. 4 – 10" XS / 6" XS

(SZMF-Order no.: F4 10 014 04)

Hydrostatic pressure burst tests on four welded pipe components and assemblies

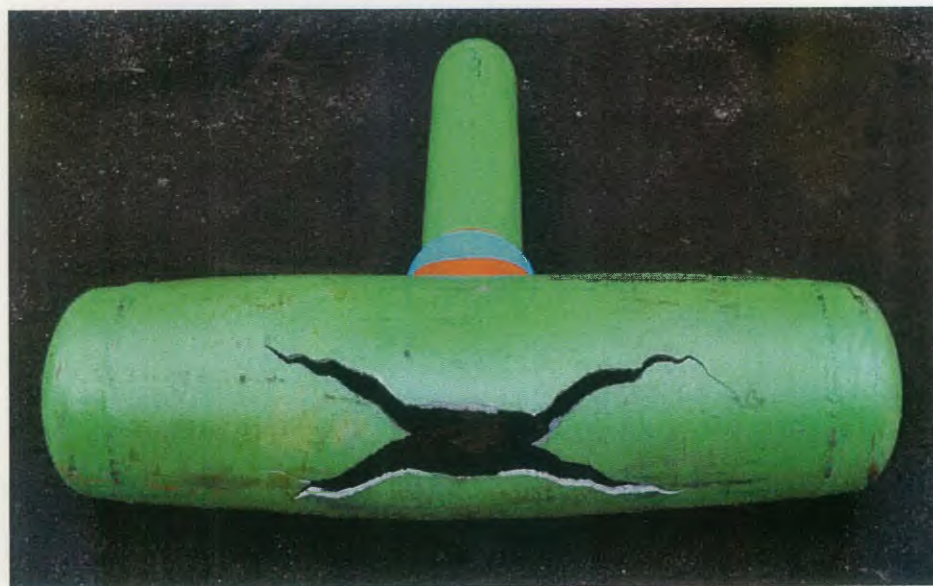


Figure 8: Specimen no. 4 – 10" XS / 6" XS before and after burst test

(SZMF-Order no.: F4 10 013 04)