E. APPENDIX A

AIRBUS	Technical Note	

Report Nr.: TN – MVQ3 – 001/04

Author:
Department.: MVQ3

Title

Incoming Inspection (NDI) of the LHS Lug Test#1 specimen

Date: 05.08.2004

Summary:

This report describes the NDI inspection that was performed on the Lug Test#1 specimen in Stade before and after the preparation of the test specimen.

The test specimen for Lug Test#1 was a LHS rear main lug cut out from a A310 skin panel. This panel originally represents a manufacturing test and has been used to demonstrate the interior quality.
The remaining test specimen is prepared for clamping to the test rig by removal of the stringer run outs (webs and inboard flange) and reinforcement by additional plies.

No hidden defects were detected by the incoming inspections.

Public Docket	Issue	Date	No. of page	Revised pages	Valid from/for
	1	05.08.2004	12		

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1. Introduction

This report describes the NDI inspection that was performed on the Lug Test#1 specimen in Stade before and after the preparation of the test specimen.
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The remaining test specimen is prepared for clamping to the test rig by removal of the stringer run outs (webs and inboard flange) and reinforcement by additional plies.

The preparation of the Lug Test#1 specimen shown in figure 1.1 and 1.2 was done in accordance to the Test Requirement 32 X 029 K4 804 P34 “AAL 587 Airbus Structure Investigation Test program Rear Main Fitting A300-600R (Lug Test#1)”.

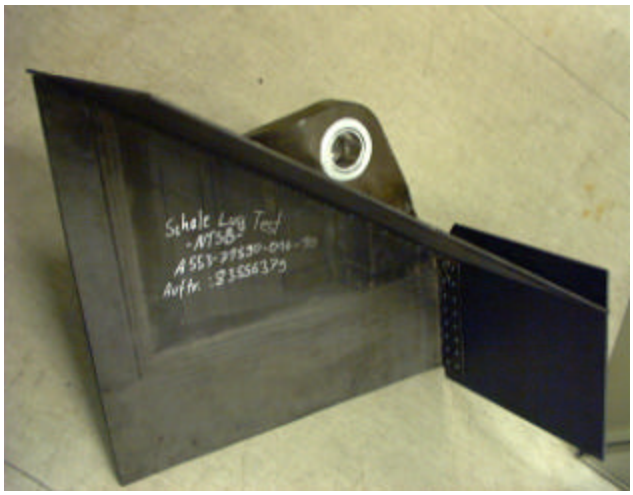


Figure 1.1

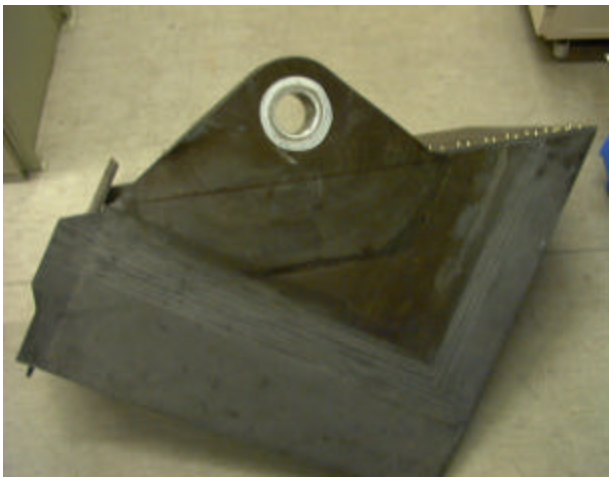


Figure 1.2

2. Incoming Inspection of the LHS Lug Test#1 specimen

The LHS Rear Main Lug Skin Panel (shown in figure 2.1) used for the Lug Test#1 test was visually inspected first. – No Findings

Figure 1.2

2.1 C-Scan of the Lug Test#1 specimen

A C-scan is the visible result of an automatical test done by ultrasonic through transmission. The test part is fixed in a certain position and placed in an immersion tank. A mechanically driven bridge carries the transducers, transmitter and receiver probe (there are four channels in use and it moves along the fixed test part).

The water transfers the ultrasound from the transmitter, through the tested part to the receiver. The signal represents the material thickness. If there is any defect, porosity or material separation within the tested material, the sound intensity will change to a lower value, the ultrasonic signal drops down. Due to this drop, the indication of the C-Scan will be different. The color in the suspicious area changes and gives the operator place and intensity of the defect for the evaluation. The C-scan represents a top view of the tested part with the local ultrasonic through transmission level.

The used inspection equipment is designed to test flat and even parts. Thickness changes are possible but no curved structures.

Technical Parameter

PRÜF-PROTOKOLL

Bauteiltyp:	Beschlagsausschnitt
Serien-Nummer:	0146
Prüfdatum:	22.08.2002 14:06:56

Administrative Bauteil-Daten:

Zuordnungs-Nr.	ZN78132
Auftrag-Nr.:	043 SN0146
HTZ:	A553-.....
Klebecharge-Nr.:	2/5866

Prüfung:

Prüfauftrag	A24480
US-Datensatz:	US 3.5MHz 4PK 0.5
Scan-Parameter:	SC_1_1_230_130
QVA-Vorschrift	QVA S10.....
TPV:	
Prüfverfahren:	Durchschallung
US-Gerät:	SAPHIRplus
Aktive Prüfköpfe:	4
Scangeschwindigkeit:	350 mm/s
Messpunktabstand (X):	1,0 mm
Messpunktabstand (Y):	1,0 mm

Durchschallung:

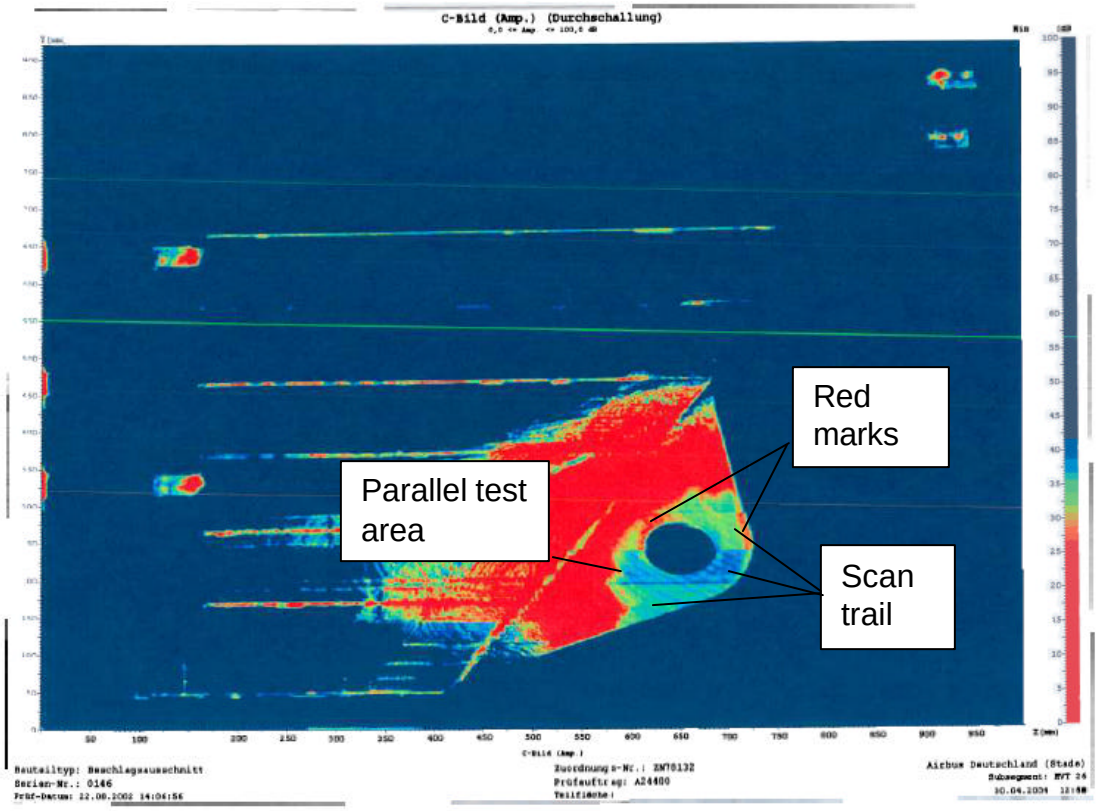
Prüfkopftyp (Sender):	Gamma Focus 3.5 MHz				
Prüfkopftyp (Empfänger):	Gamma 3.5 MHz				
Prüffrequenz:	3,5 MHz				
Abstand Sender-Bauteil:	130 mm				
Abstand Empfänger-Bauteil:	230 mm				
US-Amplitude Sollwert:	75,00	75,00	75,00	75,00	dB
US-Amplitude Ist-Mittelwert	73,33	73,23	72,99	73,06	dB
US-Amplitude Korrektur:	1,67	1,77	2,01	1,94	dB

Bewertung:

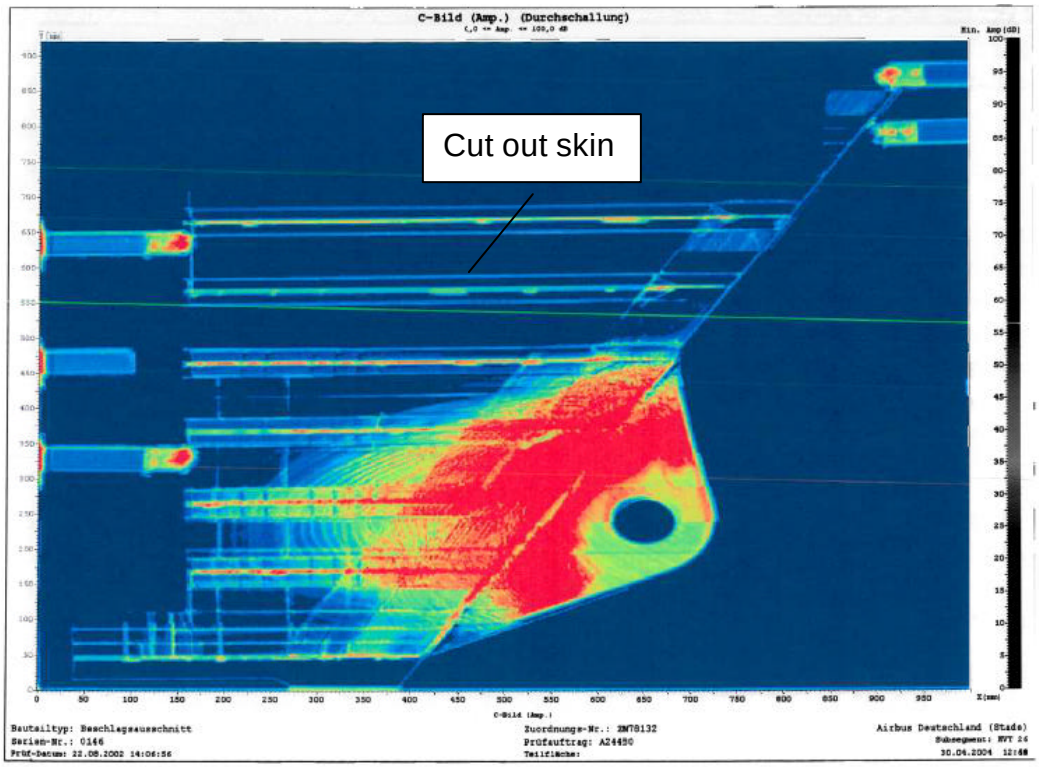
Nachausdruck des Auftrages vom 12.08.2002

C-Scan figure 2.2

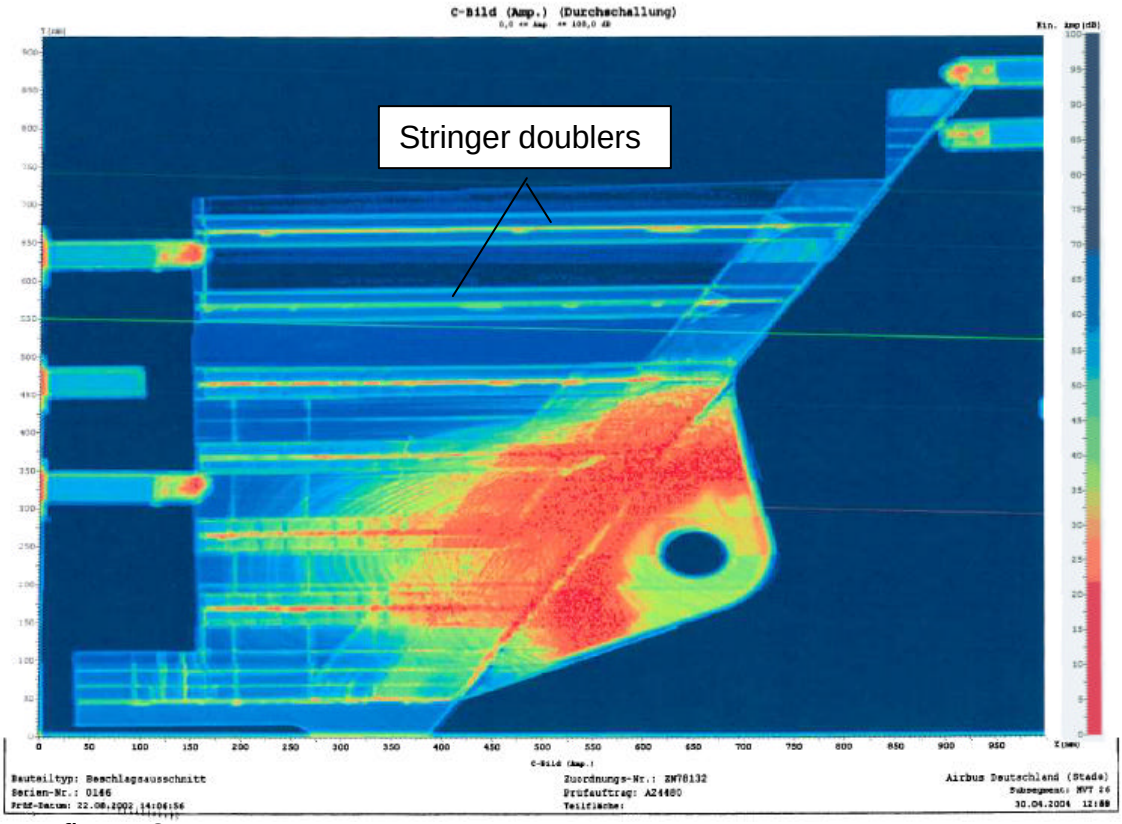
80



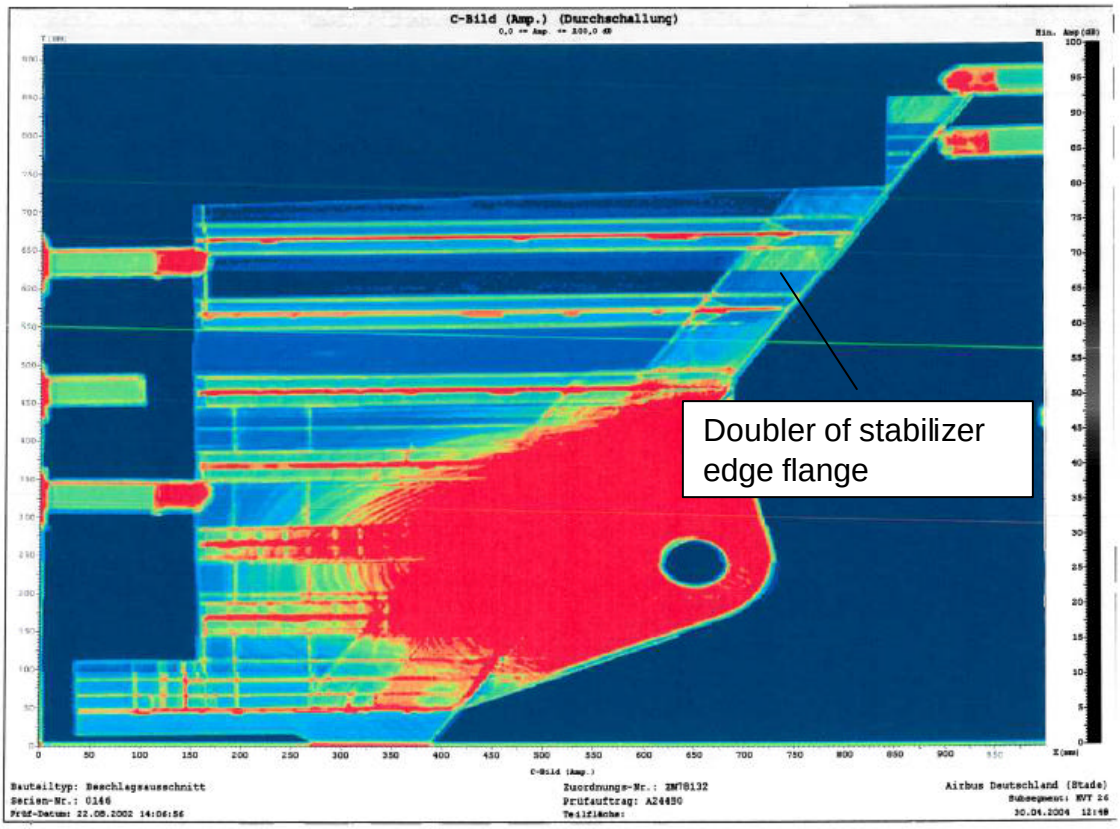
C-Scan figure 2.3



C-Scan figure 2.4



C-Scan figure 2.5



2.2 Result of the Incoming C-Scan

All areas were found to be within tolerance.

3. Second C-Scan after shell modification and reinforcement

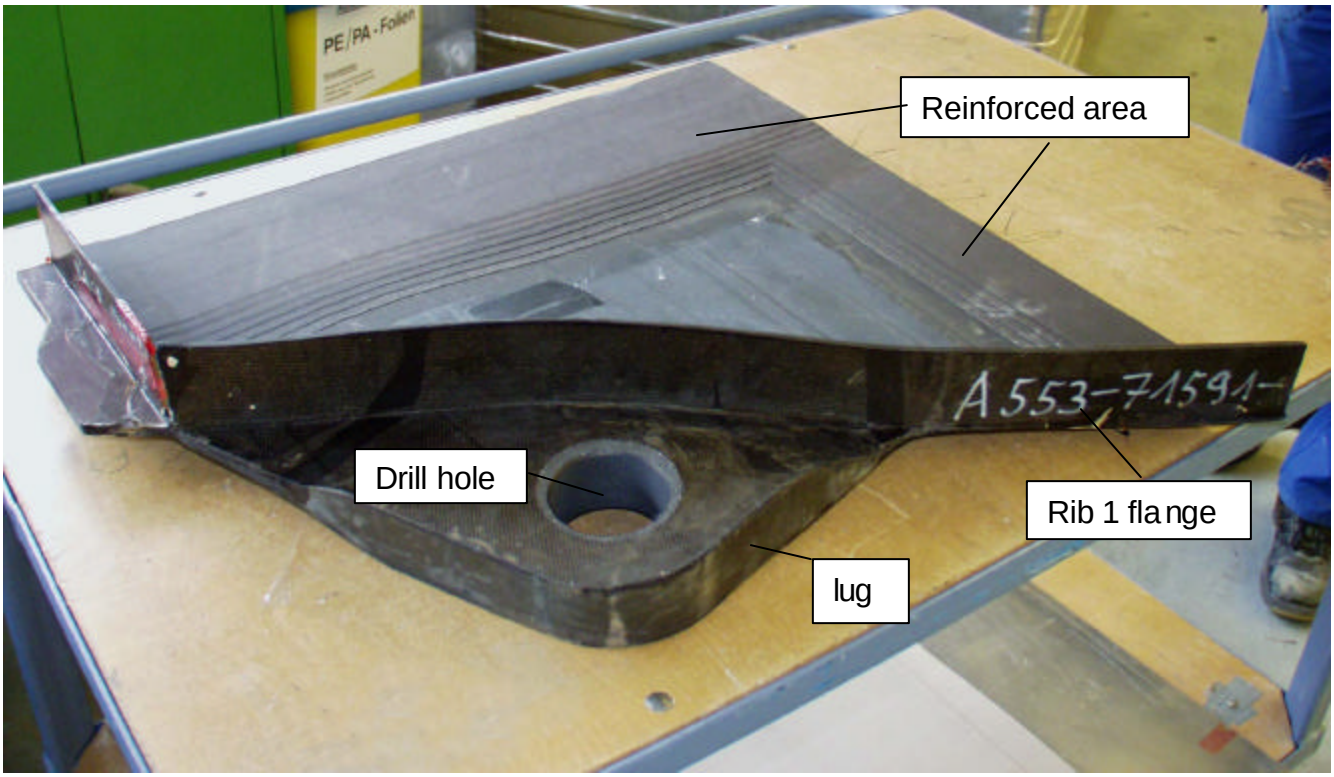


Figure 3.1

Cut out after reinforcement with additional carbon fiber layers.

Technical Parameter

Ultraschallprüfung
Tauchanlage

Airbus Deutschland (Stade)
30.04.2004 13:03:48

PRÜF-PROTOKOLL

Bauteiltyp:	Schale LUG Test NTSB
Serien-Nummer:	--- MSN - ---
Prüfdatum:	13.11.2002 11:04:28

Administrative Bauteil-Daten:

Zuordnungs-Nr.	ZN79369
Auftrag-Nr.:	83556379
HTZ:	HTZ A553-71590-016-1
Klebecharge-Nr.:	7/1432

Prüfung:

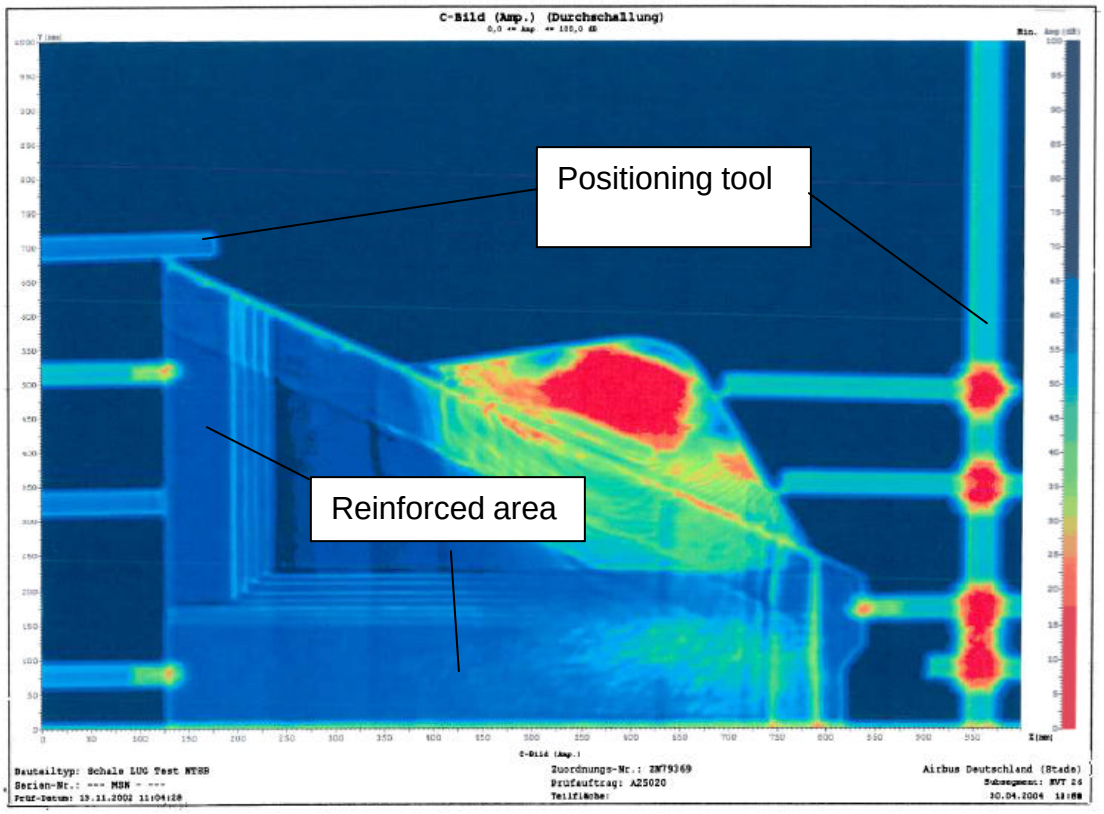
Prüfauftrag	A25020
US-Datensatz:	_US 3.5MHz 1PK 0.5
Scan-Parameter:	SC_1_1_230_130
QVA-Vorschrift	QVA S10.....
TPV:	
Prüfverfahren:	Durchschallung
US-Gerät:	SAPHIRplus
Aktive Prüfköpfe:	1
Scangeschwindigkeit:	350 mm/s
Messpunktabstand (X):	1,0 mm
Messpunktabstand (Y):	1,0 mm

Durchschallung:

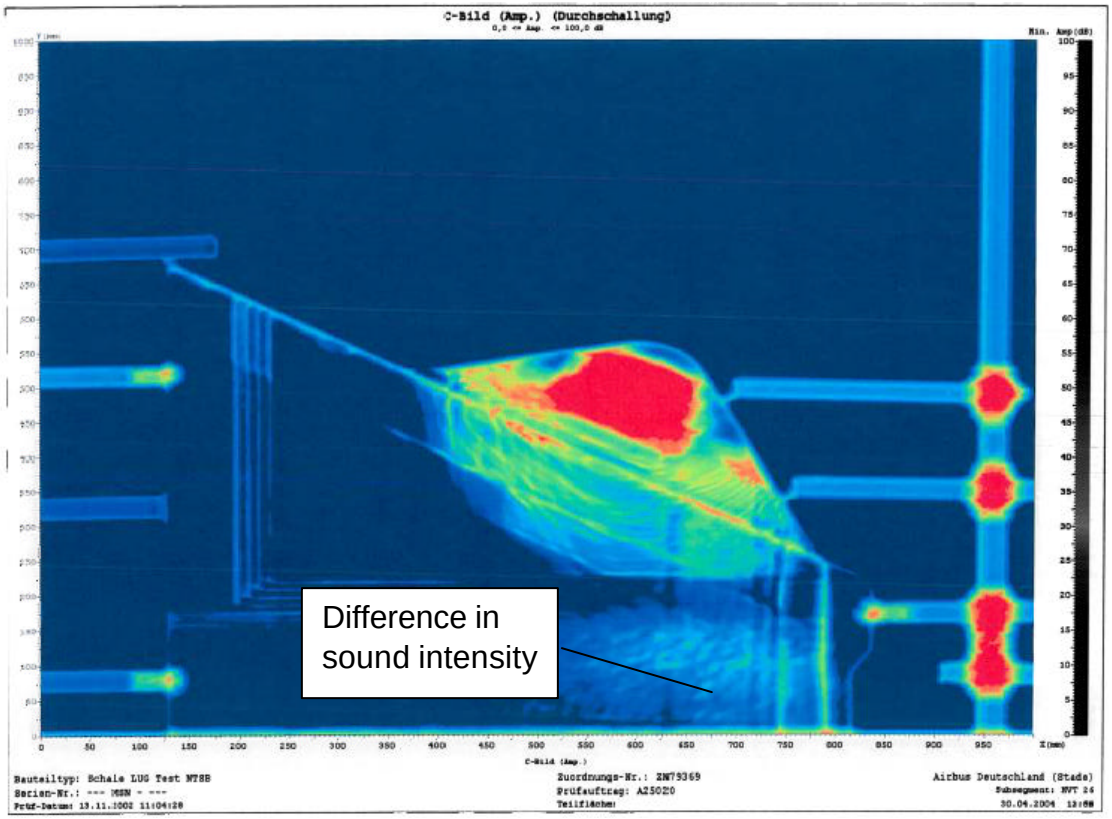
Prüfkopftyp (Sender):	Gamma Focus 3.5 MHz
Prüfkopftyp (Empfänger):	Gamma 3.5 MHz
Prüffrequenz:	3,5 MHz
Abstand Sender-Bauteil:	130 mm
Abstand Empfänger-Bauteil:	230 mm
US-Amplitude Sollwert:	70,00 dB
US-Amplitude Ist-Mittelwert	76,09 dB
US-Amplitude Korrektur:	-6,09 dB

Bewertung:
Nachausdruck des Auftrages vom 13.11.2002

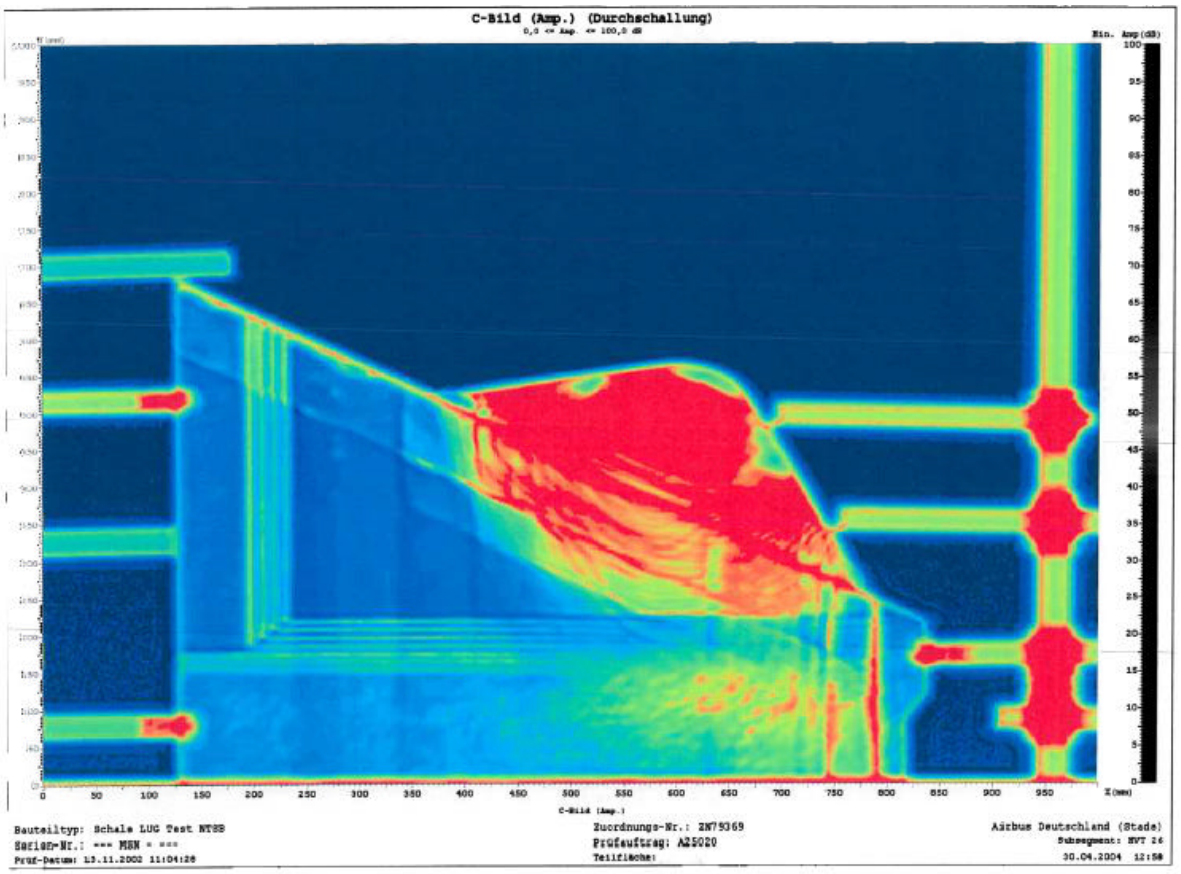
C-Scan figure 3.2



C-Scan figure 3.3



C-Scan figure 3.4



3.1 Result of the second C-Scan

There is no indication for hidden inner defects.