barge GERDA

Report on Thickness Measurement

Report No: ALF-21099

Estimated original thicknesses were used

Inspected: Stockholm
February 2021

AlfaTest Inspector – L. Grishin

AlfaTest AB
Mor Bengtasväg 10A
263 73 Arild
Sweden

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DNV·GL

APPROVAL OF SERVICE SUPPLIERS

Certificate No:
AOSS0000AY6
Revision No:
2

This is to certify that

AlfaTest AB

HELSINGBORG, Sweden

is granted acceptance for
Thickness measurements on ships and mobile offshore units , in accordance with Class Programme DNVGL-CP-0484.

Category I: Authorised to do measurements on all types and sizes of ships

This service supplier certificate will be accepted for use with all rule sets published by DNV GL.

This Certificate is valid until **2022-03-10**.

Issued at **Stockholm** on **2019-03-15**

for **DNV GL**

This document has been digitally signed and will therefore not have handwritten signatures

Borggren, Stefan
Senior Principal Surveyor

This Certificate may be withdrawn if:
1. The service provided has been improperly carried out or the results improperly reported.
2. The surveyor has found any deficiencies in the accepted operating systems of the service supplier.
3. The firm has failed to inform of any major changes having effect on the quality of the service rendered.
4. The conditions listed in the certificate are changed and/or are not fulfilled.

Remarks:

LIST OF UTM PERSONNEL

Supervisors:

Aivaras Beleckis
Lev Grisin
Boleslovas Barkauskas
Roman Saifullin
Andrei Baranjuk
Dmitry Avotin

Operators:

Vidar Lukaitis
Casper Falk Wollberg
Sergei Galimov
Ricky Hill
Artur Perminov

CERTIFICATION BODY OF NDT PERSONS
SCIENTIFIC AND TECHNICAL CENTRE "SICH SERT" LLC
APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF ISO/IEC 17024

CERTIFICATION OF CONFORMITY

№ 475.05

This certificate avouch that **Lev Grisin**
(name, surname)

according to requirements of certification system on EN ISO 9712 and SNT-TC-1A is certified as an specialist

according to the **Ultrasonic testing (UT)**

on **level II (second)**
(testing method, testing symbol, level of qualification)

and is entitled to control: **0 – metalware and semimanufactured goods (different combinations c, f, w, t and wp), 1 – castings (c), 2 – forgings (f), 3 – welded products (w), 3a – welding deposition (w), 4 – tubes and pipes, including flat products for the manufacturing of welded pipes (t), 5 – wrought products (wp), 5a – rolled stock (wp)**
(production type)

In sectors: **7 – metal manufacturing (combining c, f, t, w and wp), 8 – pre and in-service testing of equipment, plant and structure (combining c, f, w, t, wp and other product sectors), 9 – railway maintenance (combining f, wp and other product sectors), 11 – metalwork and metal production, 15 – pipelines, 17 – drilling equipment, 18 – lifting machines, 19 – metalwares and building constructions, 20 – shipbuilding and shiprepair**

Certification is valid till **12.02.2023**

Given in according to decision about certification **12.02.2018** **№ 475.05**

Scientific and Technical centre "Sich Sert" LLC
(place of given)

Head of Certification Body of Persons (signature) **V.Rodionova** (N.S.)

Stamp here СЕРТ

Certificate
Verification of Calibration

Equipment Tested

Test Date: *2020-09-09*
Due Date: *2021-09-09*

Instrument Type: *Ultrasonic Thickness Gauge*
Manufacturer: *GE Inspection Technologies*
Model: *DM4*
Serial No: *16855 - *O1DCW5**
Probe: *DA 451 – 59167 52128*
Other Information: *n/a*

Calibration Procedure: *(AT) 2.1.13 and User Manual*
Couplant Gel used: *Soundsafe*

Calibration Standards used

Type	Serial Nr	Range	Increments	Material
Step wedge	3752	5 to 20 mm	5 mm	steel
Block VCL-5	4411	70 mm	-	steel

Test Results

Velocity	Probe	Tested Thickness	Tolerance	Test Result*
5920	5 MHz	5.0 mm	+/- 0.08 mm	5.00
5920	5 MHz	10.0 mm	+/- 0.08 mm	10.05
5920	5 MHz	15.0 mm	+/- 0.08 mm	15.00
5920	5 MHz	20.0 mm	+/- 0.08 mm	20.00

*Average of five readings taken.

Results Acceptable: **Yes**

Calibration verification test performed by AlfaTest AB according to IACS requirements.

Tested By:	Signature	Date of Test:
Dmitry Avotin		2020-09-09

AlfaTest AB
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Sweden

Tel: +46 (0)42 213899
info@alfatest.se
www.alfatest.se

General Particulars

Ship's name:	**Gerda**
IMO number:	
Class identity number:	
Port of registry:	
Gross tons:	
Deadweight (t):	
Date of build:	
Classification society:	

Thickness measurement company	**AlfaTest AB**		
Certified by:	**DNV GL**		
Certificate number:	**AOSS0000AY6**		
Certificate valid from:	**2019-03-14**	to	**2022-03-10**
Place of measurement:	**Stockholm**		
Thickness measurements from:	**2021-02-05**	to	**2021-02-05**
Next survey:	**unknown**	due	
Details of measurement equipment:	**GE DM4**		
Qualification of operator:	**Level II**		
Date of reporting:	**2021-02-06**		
Applied Rule Set:	**Det Norske Veritas**		

Report number: **ALF-21099** consisting of **9** Sheets **7** sketches

Name of operator: **Lev Grishin**

Name of surveyor:

Signature:

Signature:

Measurement company official stamp:

Classification society official stamp:

NOTES

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Legend

Symbol	Description
S	substantial corrosion
C	to be coated
L	local corrosion
R	to be renewed
?	missing original thickness
!	measured thickness greater than original thickness

Miscellaneous Plates (Bottom plating)

STRUCTURAL MEMBER: Miscellaneous Plates

LOCATION OF STRUCTURE: Bottom plating

DESCRIPTION	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Bottom plating	A1	8.0	1.60	7.3	7.2	0.7	8.8		0.8	10.0	
Bottom plating	A2	8.0	1.60	7.9	7.5	0.1	1.2		0.5	6.3	
Bottom plating	A3	8.0	1.60	7.7	7.8	0.3	3.7		0.2	2.5	
Bottom plating	A3.1	8.0	1.60		7.3				0.7	8.8	
Bottom plating	A4	8.0	1.60	7.9	7.5	0.1	1.2		0.5	6.3	
Bottom plating	A4.1	8.0	1.60	8.3		--	--				
Bottom plating	A5	8.0	1.60	8.2	7.7	--	--		0.3	3.7	
Bottom plating	A5.1	8.0	1.60		8.1				--	--	
Bottom plating	A6	8.0	1.60	7.7	7.7	0.3	3.7		0.3	3.7	
Bottom plating	A6.1	8.0	1.60	7.1		0.9	11.3				
Bottom plating	A7	8.0	1.60	7.0	7.8	1.0	12.5		0.2	2.5	
Bottom plating	A7.1	8.0	1.60		7.4				0.6	7.5	
Bottom plating	A8	8.0	1.60	7.2	7.8	0.8	10.0		0.2	2.5	
Bottom plating	A8.1	8.0	1.60		7.3				0.7	8.8	
Bottom plating	A9	8.0	1.60	8.0	7.7	0.0	0.0		0.3	3.7	
Bottom plating	A9.1	8.0	1.60	7.1		0.9	11.3				
Bottom plating	A10	8.0	1.60	7.6	7.3	0.4	5.0		0.7	8.8	
Bottom plating	A10.1	8.0	1.60		8.0				0.0	0.0	
Bottom plating	A11	8.0	1.60	7.8	7.2	0.2	2.5		0.8	10.0	
Bottom plating	A11.1	8.0	1.60	8.2		--	--				
Bottom plating	A12	8.0	1.60	7.9	7.7	0.1	1.2		0.3	3.7	
Bottom plating	A12.1	8.0	1.60		7.5				0.5	6.3	
Bottom plating	A13	8.0	1.60	7.9	7.9	0.1	1.2		0.1	1.2	
Bottom plating	A13.1	8.0	1.60	7.7		0.3	3.7				
Bottom plating	A14	8.0	1.60	7.3	6.9	0.7	8.8		1.1	13.7	
Bottom plating	A14.1	8.0	1.60		6.9				1.1	13.7	
Bottom plating	A15	10.0	2.00	9.9	9.8	0.1	1.0		0.2	2.0	

Operator's Signature: _____ (Lev Grishin)

STRUCTURAL MEMBER:	Miscellaneous Plates
LOCATION OF STRUCTURE:	Bottom plating

DESCRIPTION	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Bottom plating	A16	11.0	2.20	10.8	10.7	0.2	1.8		0.3	2.7	
Bottom plating	B1	6.0	1.20	5.8	5.9	0.2	3.3		0.1	1.7	
Bottom plating	B2	6.0	1.20	6.0	5.9	0.0	0.0		0.1	1.7	
Bottom plating	B3	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Bottom plating	B4	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Bottom plating	B5	6.0	1.20	5.7	5.9	0.3	5.0		0.1	1.7	
Bottom plating	B6	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Bottom plating	B7	10.0	2.00	9.7	10.9	0.3	3.0		--	--	
Bottom plating	B8	10.0	2.00	9.7	9.9	0.3	3.0		0.1	1.0	
Bottom plating	C1	6.0	1.20	5.5	5.9	0.5	8.3		0.1	1.7	
Bottom plating	C2	6.0	1.20	6.0	5.7	0.0	0.0		0.3	5.0	
Bottom plating	C3	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	
Bottom plating	C4	10.0	2.00	8.9	10.4	1.1	11.0		--	--	
Bottom plating	C5	10.0	2.00	9.4	9.8	0.6	6.0		0.2	2.0	
Bottom plating	D1	10.0	2.00	9.8	9.6	0.2	2.0		0.4	4.0	
Bottom plating	D2	10.0	2.00	9.8	9.6	0.2	2.0		0.4	4.0	

Operator's Signature: _____ (Lev Grishin)

Miscellaneous Plates (Side shell plating)

STRUCTURAL MEMBER:	Miscellaneous Plates
LOCATION OF STRUCTURE:	Side shell plating

DESCRIPTION	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Side shell plating	E1	6.0	1.20	5.9	4.9	0.1	1.7		1.1	18.3	S
Side shell plating	E2	6.0	1.20	5.5	5.0	0.5	8.3		1.0	16.7	S
Side shell plating	E3	6.0	1.20	5.4	4.9	0.6	10.0		1.1	18.3	S
Side shell plating	E4	6.0	1.20	5.3	5.0	0.7	11.7		1.0	16.7	S
Side shell plating	E5	8.0	1.60	7.7	7.8	0.3	3.7		0.2	2.5	
Side shell plating	E6	8.0	1.60	7.2	7.4	0.8	10.0		0.6	7.5	
Side shell plating	E7	8.0	1.60	6.8	7.4	1.2	15.0		0.6	7.5	
Side shell plating	E7.1	8.0	1.60		7.7				0.3	3.7	
Side shell plating	E8	8.0	1.60	7.4	7.1	0.6	7.5		0.9	11.3	
Side shell plating	E8.1	8.0	1.60		7.1				0.9	11.3	
Side shell plating	E9	8.0	1.60	7.4	7.7	0.6	7.5		0.3	3.7	
Side shell plating	F1	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	
Side shell plating	F2	6.0	1.20	6.0	6.0	0.0	0.0		0.0	0.0	
Side shell plating	F3	6.0	1.20	6.0	6.0	0.0	0.0		0.0	0.0	
Side shell plating	F4	6.0	1.20	6.0	6.0	0.0	0.0		0.0	0.0	
Side shell plating	F5	8.0	1.60	6.6	7.3	1.4	17.5	S	0.7	8.8	
Side shell plating	F6	8.0	1.60	7.1	6.4	0.9	11.3		1.6	20.0	S
Side shell plating	F7	8.0	1.60	6.7	6.9	1.3	16.2	S	1.1	13.7	
Side shell plating	F8	8.0	1.60	6.9	6.6	1.1	13.7		1.4	17.5	S
Side shell plating	F9	8.0	1.60	6.6	6.9	1.4	17.5	S	1.1	13.7	
Side shell plating	F10	8.0	1.60	7.1	7.3	0.9	11.3		0.7	8.8	
Side shell plating	G5	8.0	1.60	7.9	7.8	0.1	1.2		0.2	2.5	
Side shell plating	G6	8.0	1.60	8.0	7.9	0.0	0.0		0.1	1.2	
Side shell plating	G7	8.0	1.60	8.0	8.0	0.0	0.0		0.0	0.0	
Side shell plating	G8	8.0	1.60	8.0	7.9	0.0	0.0		0.1	1.2	
Side shell plating	G9	8.0	1.60	7.9	8.0	0.1	1.2		0.0	0.0	
Side shell plating	G10	8.0	1.60	7.9	8.0	0.1	1.2		0.0	0.0	

Operator's Signature: _____ (Lev Grishin)

Miscellaneous Plates (Transom)

STRUCTURAL MEMBER:	Miscellaneous Plates
LOCATION OF STRUCTURE:	Transom

DESCRIPTION	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Transom plating	W1	8.0	1.60	7.8	7.6	0.2	2.5		0.4	5.0	
Transom plating	W2	8.0	1.60	5.7	6.9	2.3	28.7	R	1.1	13.7	
Transom plating	W3	6.0	1.20	5.2	5.4	0.8	13.3		0.6	10.0	
Transom plating	W4	6.0	1.20	5.8	5.9	0.2	3.3		0.1	1.7	
Transom plating	W5	6.0	1.20	5.4	5.4	0.6	10.0		0.6	10.0	

Operator's Signature:_____ (Lev Grishin)

Miscellaneous Plates (TBHD #8)

STRUCTURAL MEMBER:	Miscellaneous Plates
LOCATION OF STRUCTURE:	TBHD #8

DESCRIPTION	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Bulkhead plating	W1	6.0	1.20	5.5	5.3	0.5	8.3		0.7	11.7	
Bulkhead plating	W2	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	
Bulkhead plating	W3	6.0	1.20	5.9	5.5	0.1	1.7		0.5	8.3	

Operator's Signature:_____ (Lev Grishin)

Miscellaneous Plates (TBHD #29)

STRUCTURAL MEMBER:	Bulkhead plating
LOCATION OF STRUCTURE:	TBHD #29

DESCRIPTION	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Bulkhead plating	W1	8.0	1.60	7.7	7.7	0.3	3.7		0.3	3.7	

Operator's Signature:_____ (Lev Grishin)

barge GERDA

Supporting Sketches
Report No: ALF-21099

AlfaTest AB
Mor Bengtasväg 10A
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Sweden

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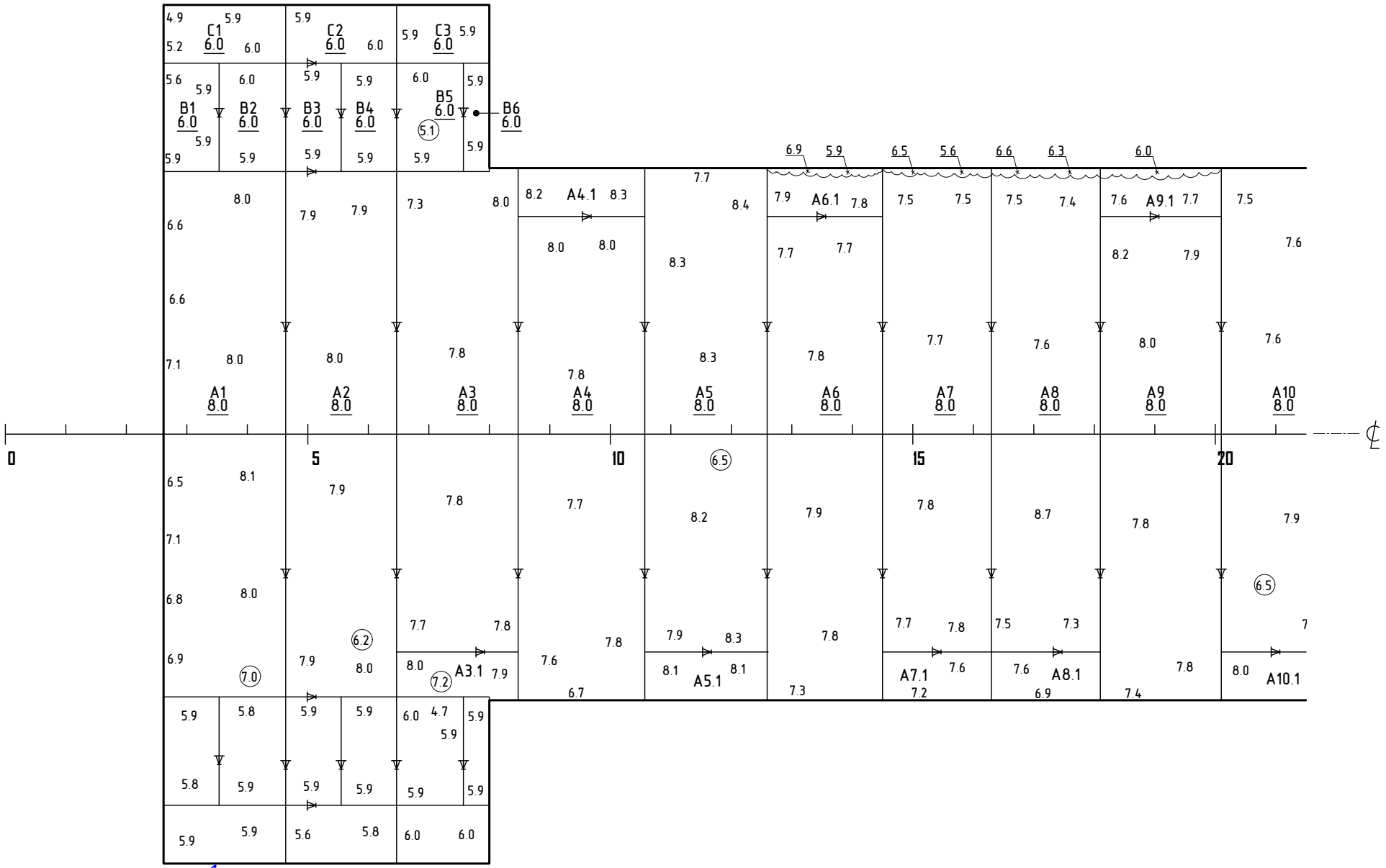
ALFATEST AB
Profilgatan 67
26135 Landskrona, SWEDEN

BOTTOM PLATING

barge **"GERDA"**
Report No: **ALF-21099**



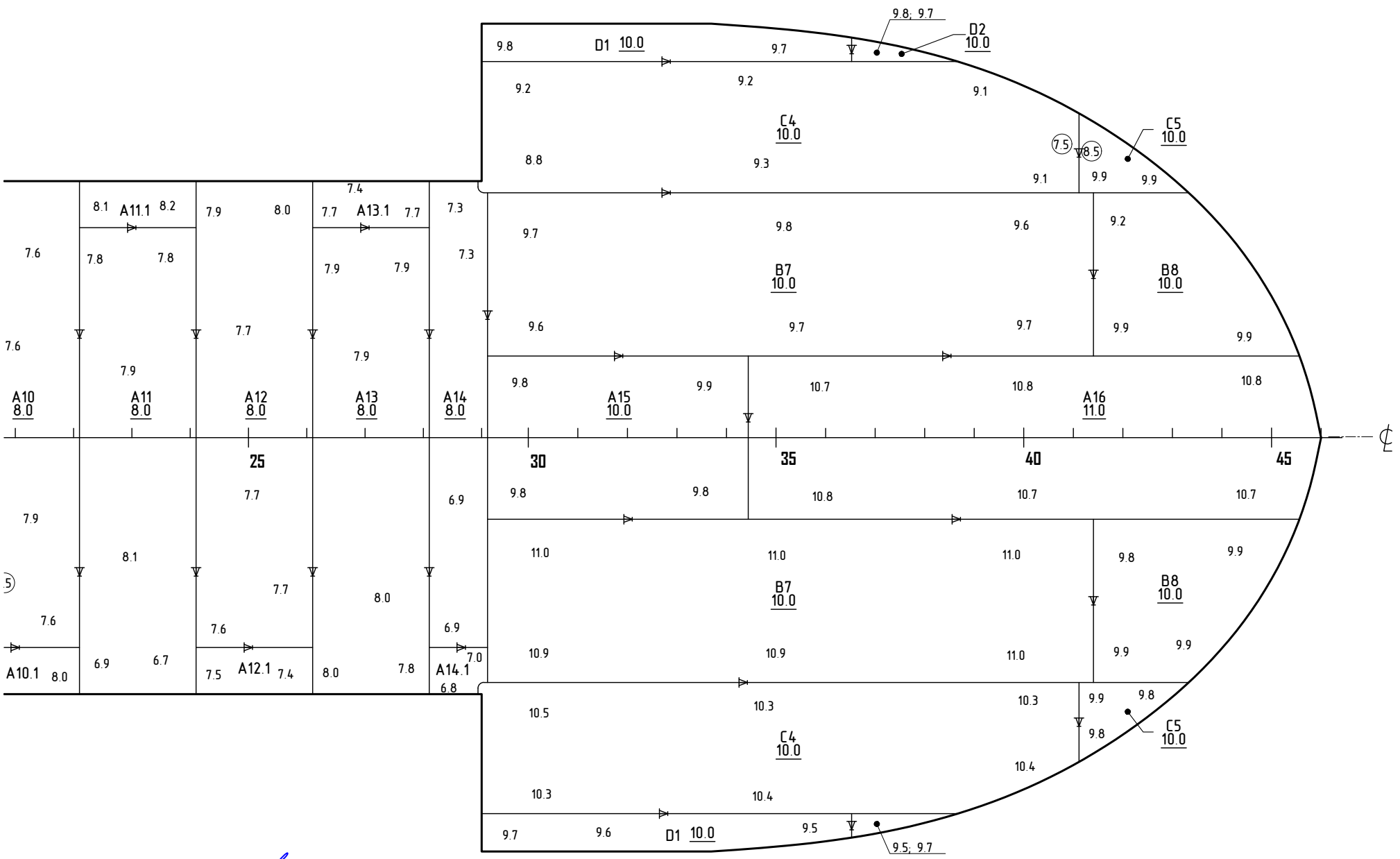
Operator's Signature:
Date: 02.2021

NB! - Original thickness is estimated

ALFATEST AB
Profilgatan 67
26135 Landskrona, SWEDEN

BOTTOM PLATING

barge **"GERDA"**
Report No: **ALF-21099**



Operator's Signature:
Date: 02.2021

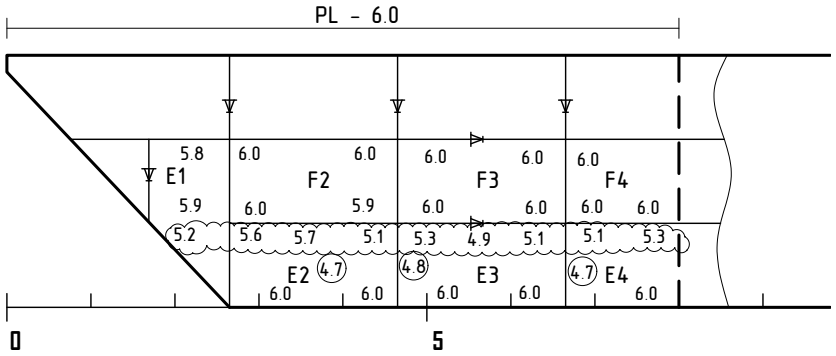
NB! - Original thickness is estimated

ALFATEST AB
Profilgatan 67
26135 Landskrona, SWEDEN

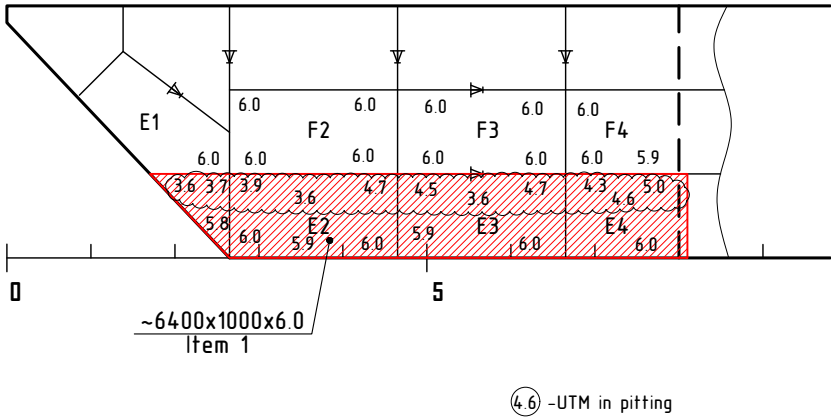
SIDE SHELL PLATING

barge **"GERDA"**
Report No: **ALF-21099**

PORTSIDE



STARBOARD

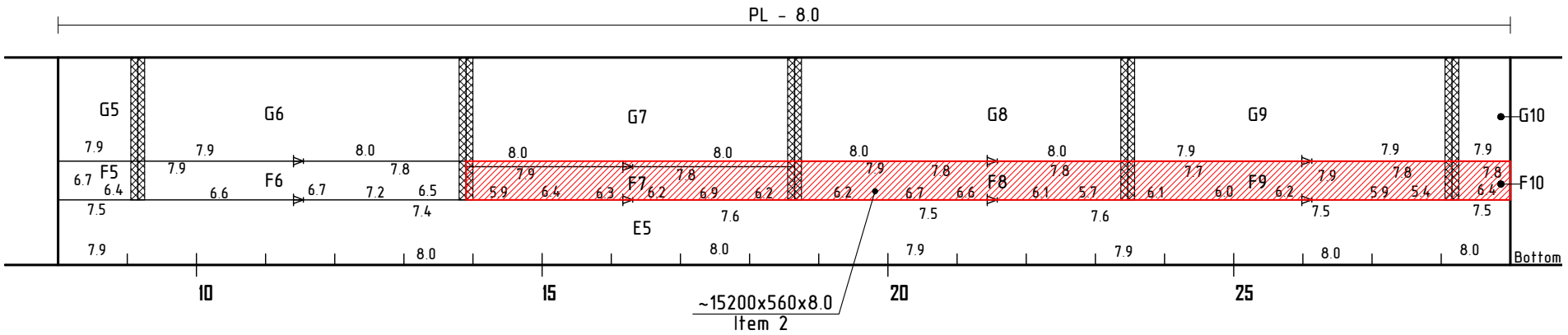


Operator's Signature:
Date: 02.2021

- Excessive diminution

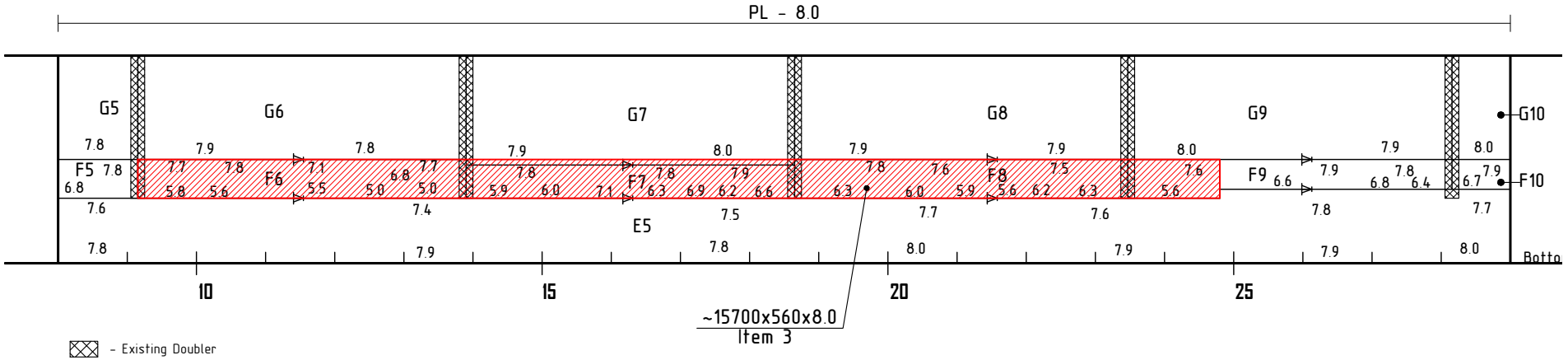
NB! - Original thickness is estimated

PORTSIDE INNER SHELL



- Existing Doubler

STARBOARD INNER SHELL



- Existing Doubler

Operator's Signature:
Date: 02.2021

- Excessive diminution

NB! - Original thickness is estimated

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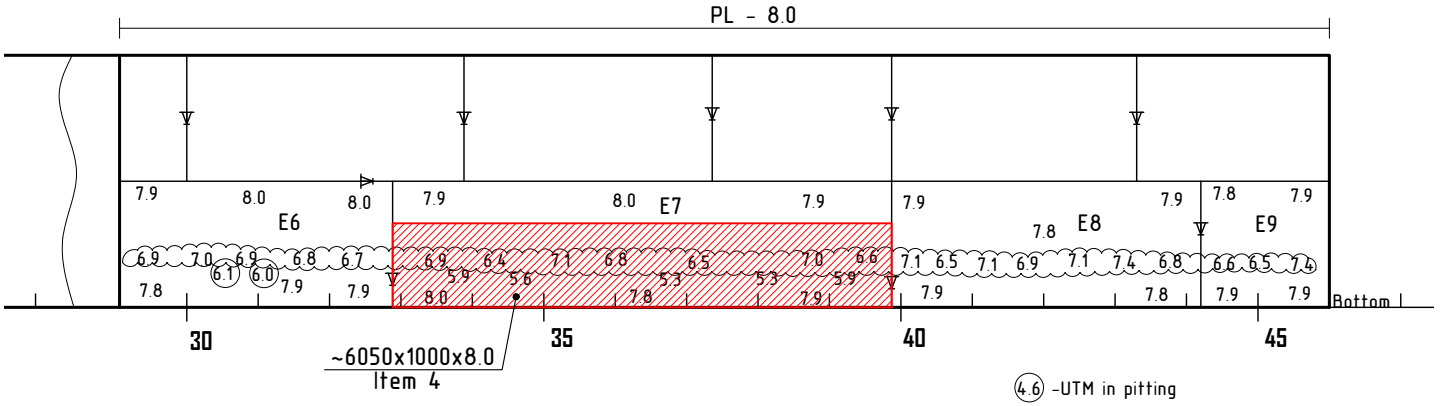
Profilgatan 67
26135 Landskrona, SWEDEN

SIDE SHELL PLATING

barge **"GERDA"**
Report No: **ALF-21099**

PORTSIDE



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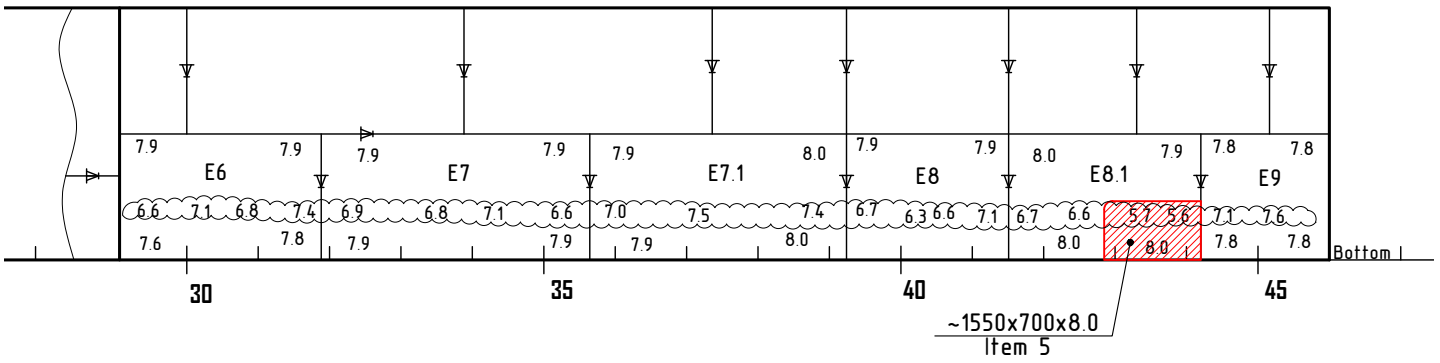


Operator's Signature:
Date: 02.2021

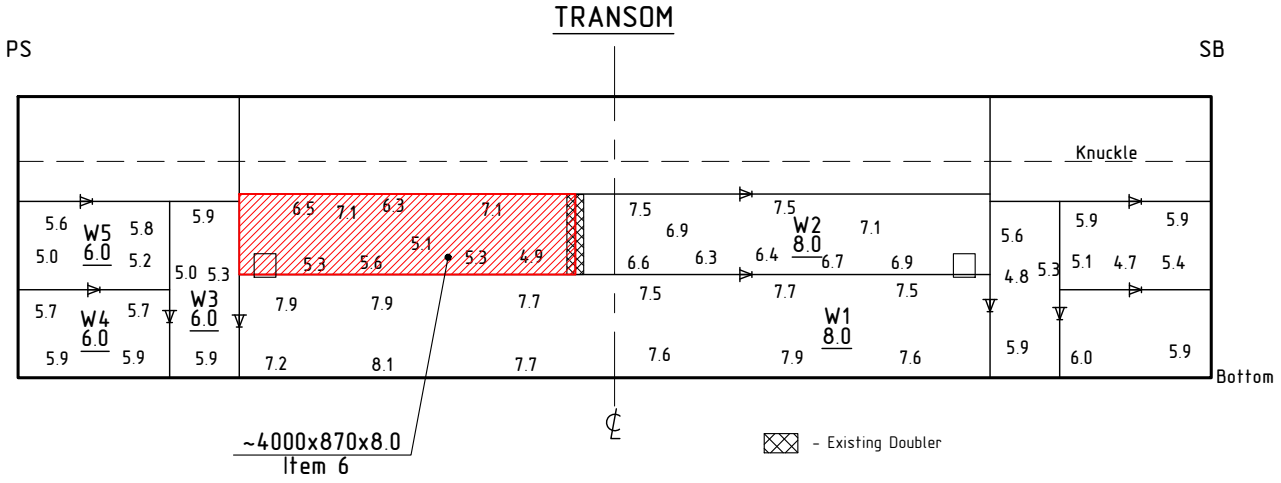
▨ - Excessive diminution

NB! - Original thickness is estimated

ALFATEST AB
Profilgatan 67
26135 Landskrona, SWEDEN

TRANSOM

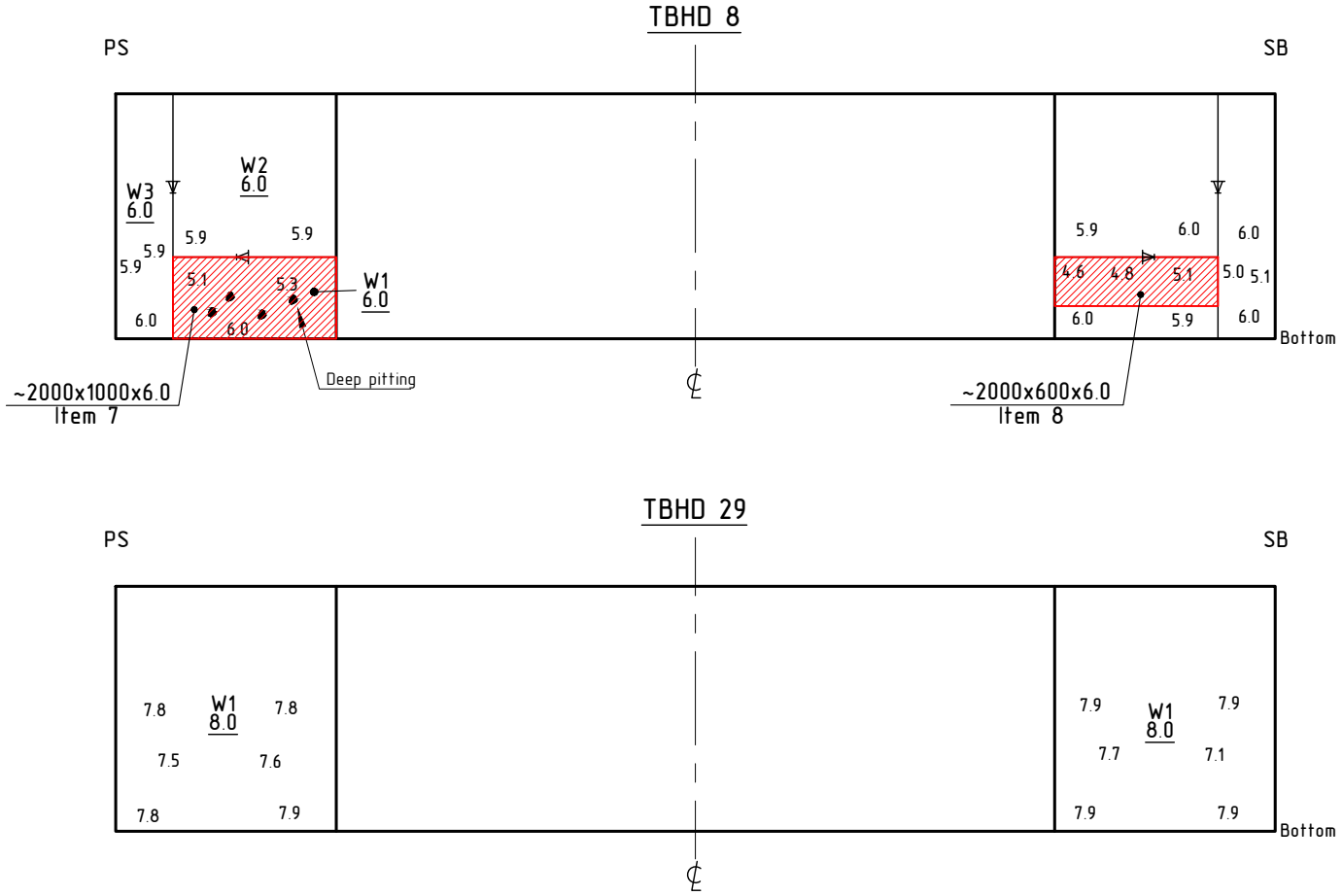
barge **"GERDA"**
Report No: **ALF-21099**



Operator's Signature:
Date: 02.2021

- Excessive diminution

NB! - Original thickness is estimated



Operator's Signature:
Date: 02.2021

– Excessive diminution

NB! – Original thickness is estimated

ALFATEST AB
Nondestructive Testing Services

RECOMMENDED REPAIR WORKS

mv "GERDA "
RRR-21099

Item No.	Description	Problem	Fr. #	Location off CL	Profile	Grade of steel	Length	Width or kg/m	T mm	Kgs	M 2	Notes	Sketch Page No.
1	**Side shell**												
1	Side shell plate	Wastage	2-8	Sb	PL		6400	1000	6.0	307.2	6.4		S-3
2	Side shell plate	Wastage	14-29	Ps	PL		15200	560	8.0	544.8	8.5		S-4
3	Side shell plate	Wastage	9-25	Sb	PL		15700	560	8.0	562.7	8.8		S-4
4	Side shell plate	Wastage	33-40	Ps	PL		6050	1000	8.0	387.2	6.1		S-5
5	Side shell plate	Wastage	43-44	Sb	PL		1550	700	8.0	69.4	1.1		S-5
6	Transom plate	Wastage	0-2	Ps	PL		4000	870	8.0	222.7	3.5		S-6
7	TBHD #8, plate	Wastage	8	Ps	PL		2000	1000	8.0	128.0	2.0		S-7
8	TBHD #8, plate	Wastage	8	Sb	PL		2000	600	8.0	76.8	1.2		S-7

Side shell	**2298.8**	37.5