

FRITIDSSKEPPET KONSTANTIN



Report on Thickness Measurement

Report No: ALF-23179

Estimated original thicknesses were used

Inspected: Stockholm

June 2023

AlfaTest Inspector – L. Grishin



APPROVAL OF SERVICE SUPPLIERS

Certificate No:
AOSS0000AY6
Revision No:
4

This is to certify that

AlfaTest AB

Arild, 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.

This Certificate is valid from **2022-03-11** to (inclusive) **2025-03-10**.

This Certificate is issued on **2022-03-01**.



for **DNV**

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

Christiansson, Philip
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This Certificate may be withdrawn if: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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: AOSS 101

Revision: 2021-03

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Certificate No: **AOSS0000AY6**
Revision No: **4**

Remarks:
LIST OF UTM PERSONNEL

Supervisors:

Lev Grisin
Boleslovas Barkauskas
Roman Saifullin
Andrei Baranjuk
Dmitry Avotin

Operators:

Vidar Lukaitis
Gareth Hann
Sergei Galimov
Ricky Hill

INTERNATIONAL CERTIFICATION SYSTEM

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

CERTIFICATION OF CONFORMITY

№ 179.13

This certificate confirms that Lev Grisin
(name, surname)

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

according to the Ultrasonic testing (UT)

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

and is entitled to control: 1 – castings (c) (ferrous and nonferrous materials), 2 – forgings (f) (all types of forgings: ferrous and non-ferrous materials), 3 – welds (w) (all types of welds, including soldering, for ferrous and non-ferrous materials), 4 – tubes and pipes (t) (seamless, welded, ferrous and non-ferrous materials, including fat products for the manufacturing of welded pipes), 5 – wrought and rolled products (wp) except forgings (e.g. plates, bar, rods)
(production type)

In sectors: 7 – manufacturing (combining c, f, w, t and wp), 8 – pre-and in-service testing which includes manufacturing (combining c, f, w, t and wp), 9 – railway maintenance (combining c, f, w, t and wp), 11 – metalwork and metal production, 12 – thermal energetics, 13 – industrial energetics, 14 – atomic energetics, 15 – pipelines, 17 – drilling equipment, 18 – load-lifting constructions and mechanisms, 19 – metalwares and building constructions, 20 – shipbuilding and shiprepair

Certification is valid till 27.11.2027

Given in according to decision about certification from 28.11.2022 № 179.13

Scientific and Technical Centre "Sich Cert" LLC
(place of given)

Head of Certification
Body of Persons



A.Filonenko
(N.S.)



Certificate

Verification of Calibration

Equipment Tested

Test Date: 2022-09-09
Due Date: 2023-09-09

Instrument Type: Ultrasonic Thickness Gauge
Manufacturer: Tritex ndt
Model: Multigauge 5500
Serial No: 55-1235
Probe: 5 MHz
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	+/- 0.053 mm	5.050
5920	5 MHz	10.0 mm	+/- 0.053 mm	10.020
5920	5 MHz	15.0 mm	+/- 0.053 mm	15.020
5920	5 MHz	20.0 mm	+/- 0.053 mm	20.030
5920	5 MHz	70.0 mm	+/- 0.061 mm	70.030

*Average of five readings taken.

Results Acceptable: **Yes**
Applicable measurement range: **5 to 70 mm**

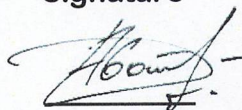
Calibration verification test performed by AlfaTest AB according to IACS requirements.

Tested By:

Signature

Date of Test:

Dmitry Avotin



2022-09-09

General Particulars

Ship's name: **KONSTANTIN**

IMO number:

Class identity number:

Port of registry: **Trollhattan**

Gross tons: **83**

Deadweight (t):

Date of build: **2000-06-01**

Classification society:

Thickness measurement company **AlfaTest AB**

Certified by: **DNV GL**

Certificate number: **AOSS0000AY6**

Certificate valid from: **2022-03-01** to **2025-03-10**

Place of measurement: **Stockholm**

Thickness measurements from: **2023-06-14** to **2023-06-14**

Next survey: **unknown** due

Details of measurement equipment: **Tritex 5500 multigauge**

Qualification of operator: **Level II**

Date of reporting: **2023-06-15**

Applied Rule Set: **Det Norske Veritas**

Report number: consisting of **11** Sheets **3** sketches

Name of operator: **L. Grishin**

Name of surveyor:

Signature:

Signature:

Measurement company
official stamp:

Classification society
official stamp:

NOTES

Checklist for UTM provider

This checklist is to be filled in by the UTM provider, and is to accompany the UTM report

Has the Pegasus Users Guide been read and understood?	
Has a kick-off meeting with the attending DNV surveyor been held?	
Has calibration and type of equipment (double echo only) been verified by the surveyor?	
Has the appropriate Rules set been chosen?	
Has the diminutions table been updated in line with the given Tmin list?	
Has the compartments list been completed as per Surveyors recommendations?	
Has the side been documented within the compartment name?	
Has a tank/space been assigned for all measurements?	
Has a tank/space been assigned on the reverse side for all plate measurements (except for internal structure)? (only applicable for CAP projects)	
Has an appropriate structural member designation been given for all measurements?	
Have the sketches been attached to their relevant tables?	
Has the original plate thickness been inserted for all measurements?	
Has the max. diminution been verified for all measurements?	
When TM-# used, has (Web Frame Ring) or (Transverse Section) been documented in an appropriate manner?	
Has the UTM report been correctly updated after renewals? (additional column in hot spots list)	
Has all relevant information regarding defects, local corrosion assessment, etc. been included in the report?	
Has average reduction in deck and bottom (longitudinal strength assessment) been calculated for all relevant Transverse Sections?	
Has the report been verified, stamped and signed by the DNV surveyor?	
Has a digital copy of the preliminary report been given to the DNV surveyor?	

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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

TM-6 BC

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

Miscellaneous Plates (Bottom plating)

STRUCTURAL MEMBER:		Miscellaneous Plates									
LOCATION OF STRUCTURE:		Bottom plating									
DESCRIPTION	Item No.	Org. Thk. mm	Max. Dim. mm	Readings		Diminution P		Diminution S			
				P	S	mm	%	mm	%		
Bottom Plating	A1	5.0	1.00	4.9	4.9	0.1	2.0	0.1	2.0		
Bottom Plating	A2	6.0	1.20	5.9	6.0	0.1	1.7	0.0	0.0		
Bottom Plating	A3	6.0	1.20	6.0	5.9	0.0	0.0	0.1	1.7		
Bottom Plating	A4	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	A5	6.0	1.20	5.9	6.0	0.1	1.7	0.0	0.0		
Bottom Plating	A6	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	A7	6.0	1.20	7.9	5.9	--	--	0.1	1.7		
Bottom Plating	A7.1	6.0	1.20	5.9		0.1	1.7				
Bottom Plating	A8	6.0	1.20	7.9	6.0	--	--	0.0	0.0		
Bottom Plating	A9	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	A10	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	B2	6.0	1.20	5.9	5.9	0.1	1.7	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	5.9	6.0	0.1	1.7	0.0	0.0		
Bottom Plating	B6	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	B7	6.0	1.20	6.0	5.9	0.0	0.0	0.1	1.7		
Bottom Plating	B8	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	B9	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	B10	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	C2	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	C4	6.0	1.20	5.9	6.0	0.1	1.7	0.0	0.0		
Bottom Plating	C5	6.0	1.20	5.9	6.0	0.1	1.7	0.0	0.0		
Bottom Plating	C6	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	C7	6.0	1.20	6.0	6.0	0.0	0.0	0.0	0.0		
Bottom Plating	C8	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		
Bottom Plating	C9	6.0	1.20	5.9	5.9	0.1	1.7	0.1	1.7		

Operator's Signature: _____ (L. Grishin)

TM-6 BC

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

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	C10	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	
Bottom Plating	D1	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Bottom Plating	D2	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Bottom Plating	D3	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Bottom Plating	D4	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	

Operator's Signature: _____ (L. Grishin)

TM-6 BC

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

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	W1	5.0	1.00	4.9	4.9	0.1	2.0		0.1	2.0	
Side shell plating	W2	6.0	1.20	5.8	5.9	0.2	3.3		0.1	1.7	
Side shell plating	W3	5.0	1.00	5.0	4.9	0.0	0.0		0.1	2.0	
Side shell plating	W4	15.0	3.00	15.0	15.0	0.0	0.0		0.0	0.0	
Side shell plating	W5	6.0	1.20	5.8	5.9	0.2	3.3		0.1	1.7	
Side shell plating	W6	6.0	1.20	6.0	6.0	0.0	0.0		0.0	0.0	
Side shell plating	W7	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W8	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W9	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W10	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	
Side shell plating	W11	15.0	3.00	15.0	15.0	0.0	0.0		0.0	0.0	
Side shell plating	W12	6.0	1.20	5.9	6.1	0.1	1.7		–	–	
Side shell plating	W13	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W14	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W15	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W16	6.0	1.20	5.9	5.9	0.1	1.7		0.1	1.7	
Side shell plating	W17	6.0	1.20	5.9	6.0	0.1	1.7		0.0	0.0	

Operator's Signature: _____ (L. Grishin)

TM-5 BC

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

Transverse Bulkhead at Frame Aft TBHD (Engine room)

COMPARTMENTS:											
LOCATION OF STRUCTURE:				Engine room				FRAME NO.:			Aft TBHD
STRUCTURAL COMPONENT (Plating / Stiffener)	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Transverse Bulkhead Plating	W1	5.0	1.00	5.0	4.9	0.0	0.0		0.1	2.0	

Operator's Signature: _____ (L. Grishin)

TM-5 BC

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

Transverse Bulkhead at Frame Fwd TBHD (Engine room)

COMPARTMENTS:											
LOCATION OF STRUCTURE:				Engine room				FRAME NO.:			Fwd TBHD
STRUCTURAL COMPONENT (Plating / Stiffener)	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Transverse Bulkhead Plating	W1	5.0	1.00	4.9	4.9	0.1	2.0		0.1	2.0	

Operator's Signature: _____ (L. Grishin)

TM-5 BC

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

Transverse Bulkhead at Frame Transom (Transom of hull)

COMPARTMENTS:											
LOCATION OF STRUCTURE:			Transom of hull				FRAME NO.:		Transom		
STRUCTURAL COMPONENT (Plating / Stiffener)	Item No.	Org. Thk.	Max. Dim.	Readings		Diminution P			Diminution S		
		mm	mm	P	S	mm	%		mm	%	
Transverse Bulkhead Plating	W1	6.0	1.20	6.0	5.9	0.0	0.0		0.1	1.7	
Transverse Bulkhead Plating	W2	6.0	1.20	6.0		0.0	0.0				

Operator's Signature: _____ (L. Grishin)

Report on THICKNESS MEASUREMENT

Ship's name: KONSTANTIN

Class identity no.:

Report no.:

Hotspots

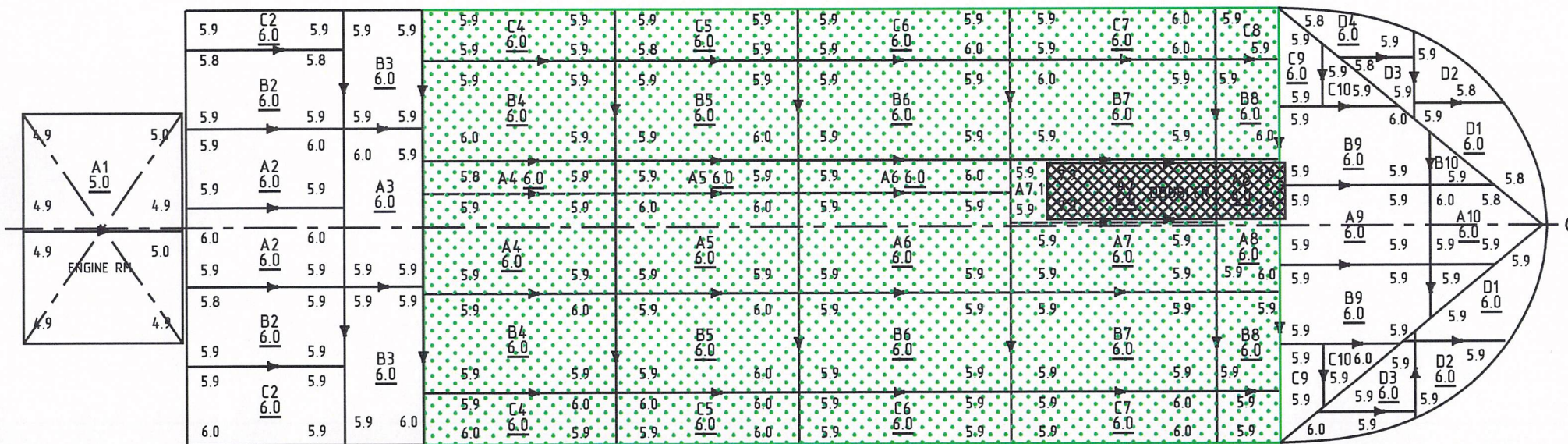
104 measurements have been recorded. None of them were rated "R" or "S".
Warning: 3 reading values are exceeding original thickness.

Operator's Signature: _____ (L. Grishin)

ALFATEST AB
 Profilgatan 67
 26135 Landskrona, SWEDEN


BOTTOM PLATING

m/v "KONSTANTIN"
 Report No: ALF-23179

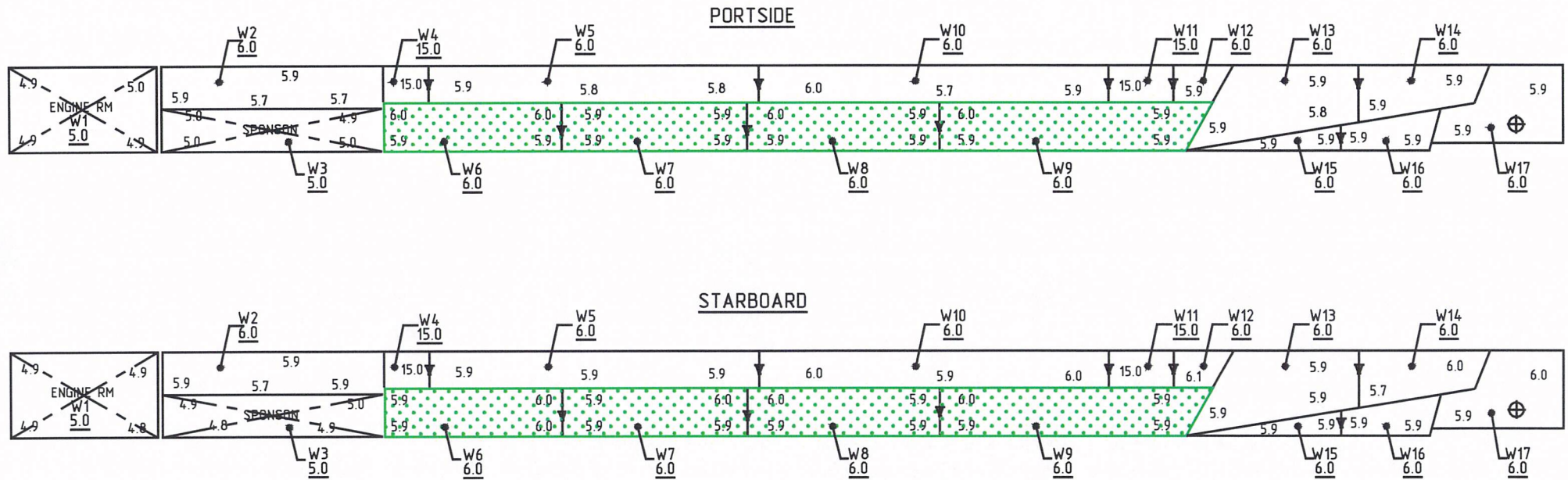



- Existing Doubler

- Existing Doubler

Operator's Signature: 
 Date: 06.2023

SIDE SHELL PLATING

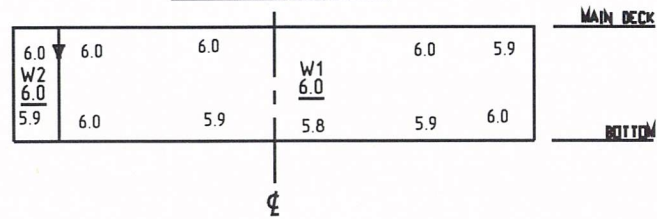


Operator's Signature: 
 Date: 06.2023

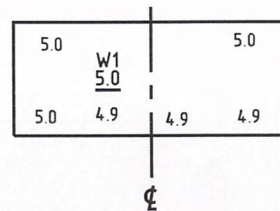
 - Existing Doubler

SIDE SHELL PLATING

TRANSOM OF HULL



AFT BULKHEAD OF ENGINE ROOM



FWD BULKHEAD OF ENGINE ROOM

