

MARTHA BLACK

ULTRASONIC THICKNESS INSPECTION OF TANKS AND CARGO HOLD, DECKS AND ENGINE ROOM PIPING



Date: July 2013

Type of Inspection: Ultrasonic thickness inspection of the water ballast tanks, fuel oil tank, cargo hold, decks and engine room piping.

Surveyor: J. Sagle & J. Gear

Inspection Firm: DNA – Diversified Naval Architects Inc.
124 Hesta St, PO Box 70
Dowling, Ontario, P0M 1R0
Tel. (705) 855 0009; FAX: (705) 855 0279
Email: jsagle@dnamarine.com

Inspection Summary: An ultrasonic thickness inspection of aforementioned structure on the Martha Black was conducted at the request of Canadian Coast Guard. The inspection was requested to document the condition of the aforementioned structures.

Thickness Measurement Class Requirements


Thickness Measurement Report

General Particulars

Ships name: Martha Black	
IMO number: 8320432	
Class identity number:	Classification society: Det Norske Veritas
Flag: Canadian	Port of Registry: Ottawa, Ontario
Gross tons: 3,818	Deadweight: 1,529
Date of build: 1985	

Name of Company performing thickness measurement: DNA - Diversified Naval Architects Inc.	
Thickness measurement company certified by: Det Norske Veritas	
Certificate No.: HAL-12-3627	
Certificate Valid from: 06/07/2012	to: 06/07/2015
Place of measurement: Hamilton, Ontario	
First date of measurement 15-Jul-13	Last date of measurement: 20-Jul-13
Survey Type - Due: Special	
Details of measurement equipment: KrautKramer Branson DMS2 OORPPK	
Qualification of operator: DNA UTII	

Report Number: DNV-	consisting of	65 pages
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Name of operator: J. Sagle/ J. Grear	Name of attending surveyor: C. Fraser	Name of authorizing surveyor: C. Fraser
Signature of operator: 	Signature of surveyor:	Signature of surveyor:
Company official stamp: DIVERSIFIED NAVAL ARCHITECTS INC.	Classification Society Official Stamp:	Classification Society Official Stamp:

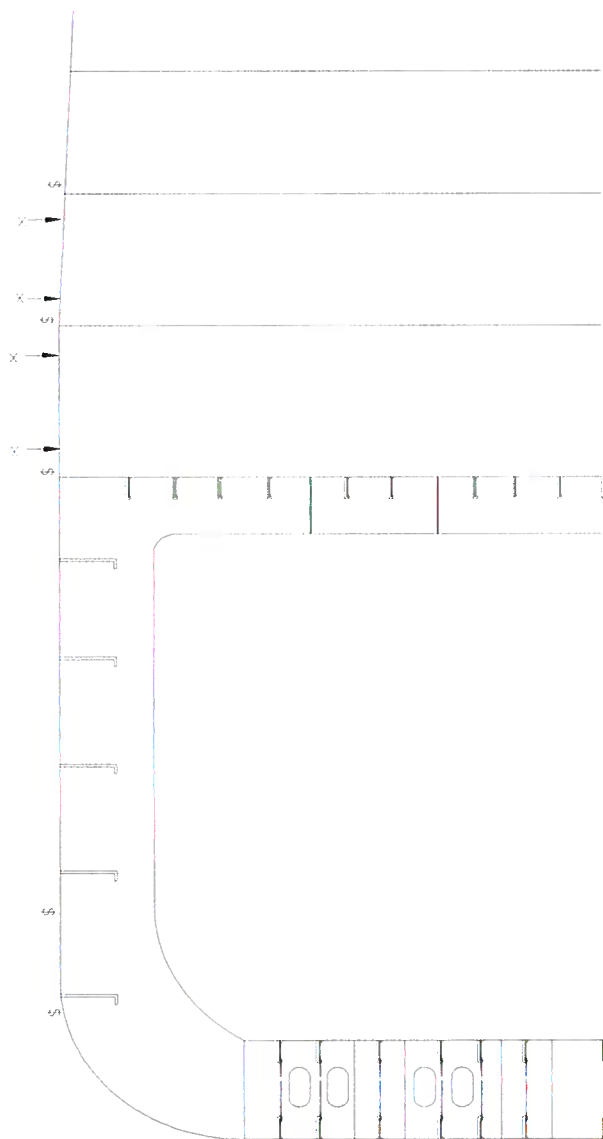
Notes:

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List of Substantial and Excessive Corrosion Measurements

Page	TM	Element	Number of Measurements	Substantial or Renewal	2SS	1SS
24	TM4	Transverse Web Plating - Port & Stbd	2			2
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MARTHA BLACK
TYPICAL TRANSVERSE SECTION
LOOKING FORWARD - PORT SHOWN STBD SIMILAR



REPORT ON THICKNESS MEASUREMENT OF ALL SHELL PLATING

Ships Name: Martha Black		IMO Number: 8320432	Report Number: DNV-
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STRAKE POSITION		Wind Strake																						
No. OR LETTER	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	FORWARD READING				AFT READING				DIMINUTION S				MEAN DIMINUTION				MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %	
					GAUGED		DIMINUTION P		DIMINUTION S		GAUGED		DIMINUTION P		DIMINUTION S		P		S					
					P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm	%				
12th forward																								
11th																								
10th																								
9th																								
8th					41.00	32.80	35.53	38.27	42.34	41.30	-	-	-	42.01	43.11	-	-	-	-	-	-	20.0	13.3	6.7
7th					31.50	25.20	27.30	29.40	30.78	30.23	0.72	2.29	4.03	31.71	30.24	-	-	1.26	4.00	0.36	1.27	20.0	13.3	6.7
6th					31.50	25.20	27.30	29.40	31.46	30.56	0.04	0.13	2.98	29.48	30.63	2.02	6.41	0.87	2.76	1.03	0.91	20.0	13.3	6.7
5th					31.50	25.20	27.30	29.40	30.38	29.85	1.12	3.56	5.24	30.58	30.12	0.92	2.92	1.38	4.38	1.02	1.52	20.0	13.3	6.7
4th					31.50	25.20	27.30	29.40	29.60	29.88	1.90	6.03	5.14	29.81	30.57	1.69	5.37	0.93	2.95	1.80	1.28	20.0	13.3	6.7
3rd					24.00	19.20	20.80	22.40	22.98	24.21	1.02	4.25	-	22.81	23.63	1.19	4.96	0.37	1.54	1.11	0.19	20.0	13.3	6.7
2nd					24.00	19.20	20.80	22.40	22.88	23.19	1.12	4.67	3.37	22.85	22.91	1.35	5.63	1.09	4.54	1.24	0.95	20.0	13.3	6.7
1st					24.00	19.20	20.80	22.40	22.91	24.62	1.09	4.54	-	22.97	22.93	1.03	4.29	1.07	4.46	1.06	0.54	20.0	13.3	6.7
Arndships					24.00	19.20	20.80	22.40	23.30	23.75	0.70	2.92	1.04	23.44	24.34	0.56	2.33	-	-	0.63	0.13	20.0	13.3	6.7
1st					24.00	19.20	20.80	22.40	24.09	23.51	-	-	2.04	24.74	23.21	-	-	0.79	3.29	-	0.64	20.0	13.3	6.7
2nd					24.00	19.20	20.80	22.40	23.34	23.44	0.66	2.75	2.33	23.38	23.68	0.62	2.58	0.32	1.33	0.64	0.44	20.0	13.3	6.7
3rd					28.50	22.80	24.70	26.60	27.55	27.41	0.95	3.33	3.82	27.64	27.64	0.86	3.02	0.86	3.02	0.90	0.98	20.0	13.3	6.7
4th					28.50	22.80	24.70	26.60	28.15	28.00	0.35	1.23	1.75	27.58	27.54	0.82	3.23	0.96	3.37	0.64	0.73	20.0	13.3	6.7
5th					28.50	22.80	24.70	26.60	27.37	27.81	1.13	3.86	2.42	27.97	28.14	0.53	1.86	0.36	1.26	0.83	0.53	20.0	13.3	6.7
6th					28.50	22.80	24.70	26.60	27.86	27.96	0.64	2.25	1.89	27.44	28.49	1.06	3.72	0.01	0.04	0.85	0.28	20.0	13.3	6.7
7th					32.00	25.60	27.73	29.87	31.57	30.38	0.43	1.34	5.06	32.41	31.89	-	-	0.11	0.34	0.22	0.87	20.0	13.3	6.7
8th																								
9th																								
10th																								
11th																								
2nd aft																								

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF ALL SHELL PLATING

Ships Name: Martha Black		IMO Number: 8320432	Report Number: DNV-
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STRAKE POSITION		Water Strake																							
PLATE POSITION	NO. OR LETTER	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	FORWARD READING				DIMINUTION S				AFT READING				DIMINUTION S				MEAN DIMINUTION	ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
						GAUGED		DIMINUTION P		GAUGED		DIMINUTION P		GAUGED		DIMINUTION P		mm		%					
						P	S	mm	%	P	S	mm	%	P	S	mm	%	P	S	mm	%				
2th forward																									
11th																									
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Operator's Signature:	Surveyor's Signature:
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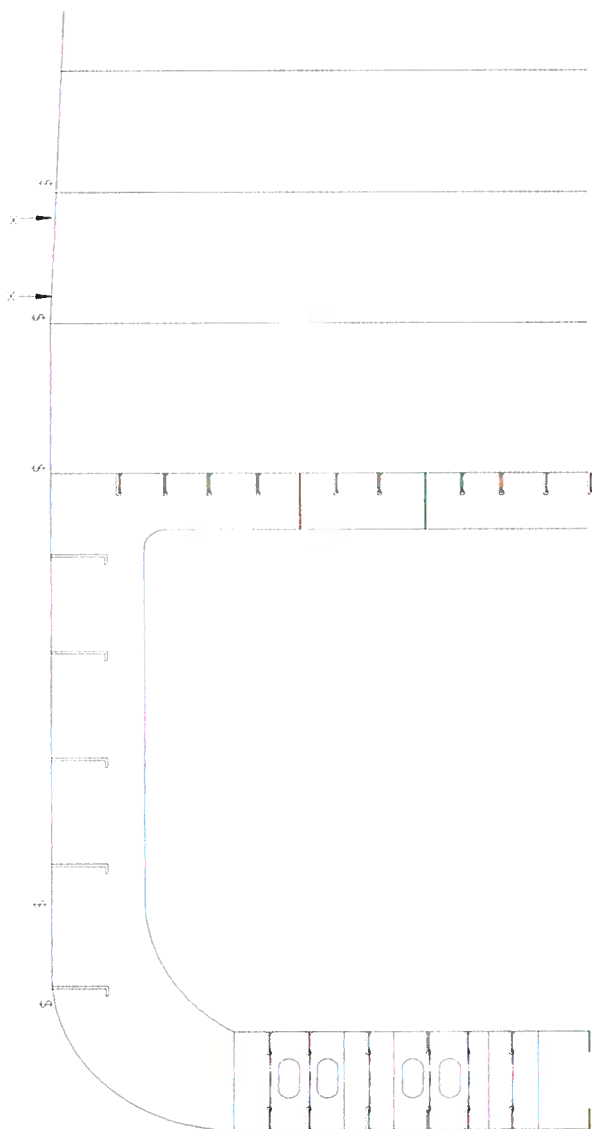
REPORT ON THICKNESS MEASUREMENT OF ALL SHELL PLATING

Ships Name: Martha Black		IMO Number: 8320432	Report Number: DNV-
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STRAKE POSITION		Keel Strake																						
PLATE POSITION	NO. OR LETTER	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	FORWARD READING				AFT READING				MEAN DIMINUTION				MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %				
						GAUGED		DIMINUTION P		DIMINUTION S		GAUGED		DIMINUTION P		DIMINUTION S					P		S	
						P	S	mm	%	mm	%	P	S	mm	%	mm	%				P	S	mm	%
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Operator's Signature:	Surveyor's Signature:
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MARTHA BLACK
TYPICAL TRANSVERSE SECTION
LOOKING FORWARD - PORT SHOWN STBD SIMILAR



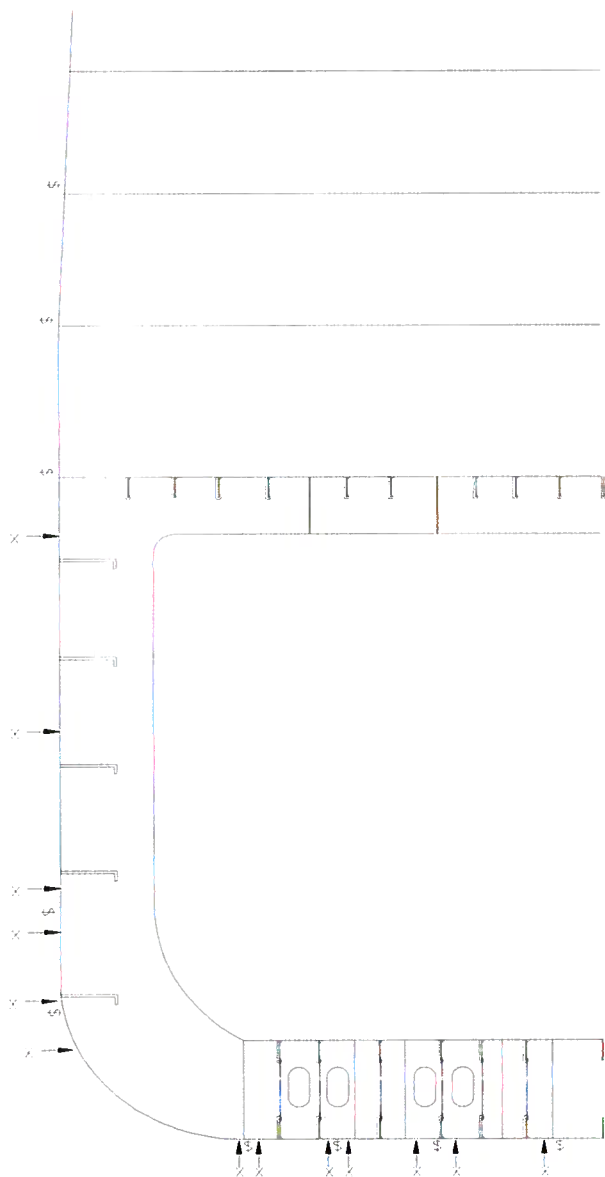
**REPORT ON THICKNESS MEASUREMENT OF SHELL AND DECK PLATING
(ONE, TWO OR THREE TRANSVERSE SECTIONS)**

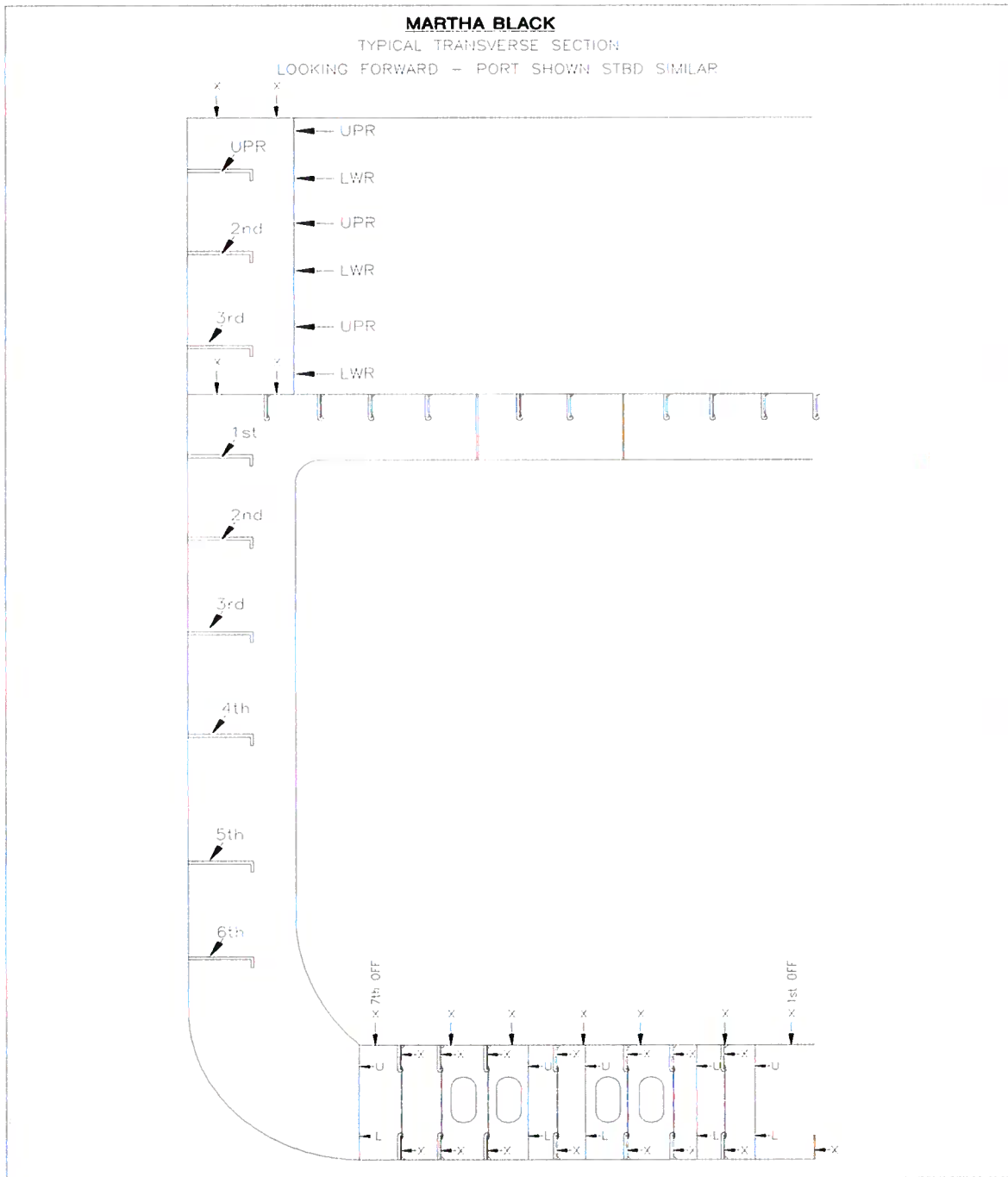
Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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Operator's Signature:	Surveyor's Signature:
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MARTHA BLACK
 TYPICAL TRANSVERSE SECTION
 LOOKING FORWARD - PORT SHOWN STBD SIMILAR





Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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	FIRST TRANSVERSE SECTION AT FRAME 64								SECOND TRANSVERSE SECTION AT FRAME 98								THIRD TRANSVERSE SECTION AT FRAME 134																					
STRUCTURAL MEMBER	ITEM No.	ORG. THK. mm	Class Mn. THK mm	ZSS mm	DIMINUTION P			CLASS 1SS mm	ITEM ORG. THK. mm	Class Mn. THK mm	ZSS mm	GAUGED			CLASS 1SS mm	ITEM ORG. THK. mm	Class Mn. THK mm	ZSS mm	GAUGED			CLASS 1SS mm	DIMINATION P	DIMINATION S			MAX ALLOW DIM %	MAX ZSS DIM %	MAX									
					P	S	%					P	S	%					P	S	%			P	S	%				P	S	%	P	S	%			
					mm	mm	%					mm	mm	%					mm	mm	%			mm	mm	%				mm	mm	%	mm	mm	%	mm	mm	%
Inner bottom																																						
Tank top plate																																						
3rd strake off job		10.00	8.00	8.67	9.33	10.26	-	-	-	-	-	-	-	-	ob	12.50	10.00	10.83	11.67	12.50	12.50	-	-	-	-	-	-	-	-	20	13.3	6.7						
	b	10.00	8.00	8.67	9.33	10.14	-	-	-	-	-	-	-	-	b	12.50	10.00	10.83	11.67	12.42	12.25	0.08	0.64	0.25	2.00	-	-	-	-	-	20	13.3	6.7					
2nd strake off job		10.00	8.00	8.67	9.33	10.12	-	-	-	-	-	-	-	-	ob	12.50	10.00	10.83	11.67	12.51	12.39	-	-	-	0.11	0.88	ob	10.00	8.00	8.67	9.33	10.56	10.37	-	-	20	13.3	6.7
	b	10.00	8.00	8.67	9.33	10.36	10.21	-	-	-	-	-	-	-	b	12.50	10.00	10.83	11.67	12.69	12.80	-	-	-	-	-	-	-	-	-	-	20	13.3	6.7				
1st strake off job		10.00	8.00	8.67	9.33	10.48	10.19	-	-	-	-	-	-	-	ob	10.00	8.00	8.67	9.33	10.35	10.21	-	-	-	-	-	-	-	-	-	-	20	13.3	6.7				
	b	10.00	8.00	8.67	9.33	10.33	10.38	-	-	-	-	-	-	-	b	10.00	8.00	8.67	9.33	10.24	10.36	-	-	-	-	-	-	-	-	-	-	20	13.3	6.7				
	d	10.00	8.00	8.67	9.33	10.29	10.37	-	-	-	-	-	-	-	-	10.00	8.00	8.67	9.33	10.48	10.31	-	-	-	-	-	-	-	-	-	-	20	13.3	6.7				
Tank top long																																						
7th off cl		10.00	7.50	8.33	9.17	10.13	10.02	-	-	-	-	-	-	-		8.00	5.00	6.67	7.33	8.43	8.46	-	-	-	-	-	-	-	-	-	25	16.7	8.3					
8th off cl		10.00	7.50	8.33	9.17	10.06	10.03	-	-	-	-	-	-	-		8.00	5.00	6.67	7.33	8.32	8.51	-	-	-	-	-	-	-	-	-	25	16.7	8.3					
5th off cl		10.00	7.50	8.33	9.17	10.02	10.09	-	-	-	-	-	-	-		8.00	5.00	6.67	7.33	8.41	8.35	-	-	-	-	-	-	-	-	-	25	16.7	8.3					
4th off cl		10.00	7.50	8.33	9.17	10.03	10.18	-	-	-	-	-	-	-		8.00	5.00	6.67	7.33	8.14	8.10	-	-	-	-	-	-	-	-	-	25	16.7	8.3					
3rd off cl		10.00	7.50	8.33	9.17	10.13	10.09	-	-	-	-	-	-	-		8.00	5.00	6.67	7.33	7.75	8.39	0.25	3.13	-	-	-	-	-	-	-	25	16.7	8.3					
2nd off cl		10.00	7.50	8.33	9.17	9.95	9.99	0.05	0.50	0.50	0.01	0.10	-	-		8.00																						

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF LONGITUDINAL MEMBERS (ONE, TWO OR THREE TRANSVERSE SECTIONS) ALSO ASSOCIATED LONGITUDINALS IN WAY OF TRANSVERSE STRUCTURE IN CARGO AND BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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FIRST TRANSVERSE SECTION AT FRAME 64													SECOND TRANSVERSE SECTION AT FRAME 98													THIRD TRANSVERSE SECTION AT FRAME 134												
STRUCTURAL MEMBER	ITEM No.	ORG. THK. mm	Class	Class	1SS	DIMINUITION			DIMINUITION			ITEM No.	ORG. THK. mm	Class	Class	1SS	GAUGED			DIMINUITION			DIMINUITION			MAX ALLOW DIM %	MAX 2SS DIM %	MAX										
						P	S	mm	P	S	mm						P	S	mm	P	S	mm	P	S	mm				P	S	mm	P	S	mm				
Girders																																						
	4th off cl upr	9.00	7.20	7.80	8.40	9.38	9.45	-	-	-	-	upr	12.50	10.00	10.83	11.67	12.49	12.27	0.01	0.08	0.23	1.84				20	13.3	6.7										
	lwr	9.00	7.20	7.80	8.40	9.32	9.50	-	-	-	-	lwr	12.50	10.00	10.83	11.67	12.44	12.55	0.06	0.48	-	-				20	13.3	6.7										
	2nd off cl upr	9.00	7.20	7.80	8.40	9.27	9.33	-	-	-	-	upr	17.00	13.60	14.73	15.87	16.76	16.91	16.76	0.09	0.53	0.24	1.41	upr	9.00	7.20	7.80	8.40	9.34	9.37	-	-	20	13.3	6.7			
	lwr	9.00	7.20	7.80	8.40	9.23	9.38	-	-	-	-	lwr	17.00	13.60	14.73	15.87	17.50	16.77	-	-	0.25	1.35	lwr	9.00	7.20	7.80	8.40	9.31	9.41	-	-	20	13.3	6.7				
	2nd off cl upr	9.00	7.20	7.80	8.40	9.93	9.35	-	-	-	-	upr	17.00	13.60	14.73	15.87	17.33	16.86	-	-	0.14	0.82	upr	9.00	7.20	7.80	8.40	9.27	9.48	-	-	20	13.3	6.7				
	lwr	9.00	7.20	7.80	8.40	9.41	9.30	-	-	-	-	lwr	17.00	13.60	14.73	15.87	17.51	17.20	-	-	-	-	lwr	9.00	7.20	7.80	8.40	9.26	9.53	-	-	20	13.3	6.7				
	1st off cl upr	12.00	8.60	10.40	11.20	12.29	12.39	-	-	-	-	upr	17.00	13.60	14.73	15.87	16.76	16.88	0.24	1.41	0.12	0.71	upr	12.00	8.60	10.40	11.20	12.08	12.15	-	-	20	13.3	6.7				
	lwr	12.00	8.60	10.40	11.20	12.32	12.42	-	-	-	-	lwr	17.00	13.60	14.73	15.87	16.75	17.28	0.25	1.47	-	-	lwr	12.00	8.60	10.40	11.20	12.12	12.19	-	-	20	13.3	6.7				
8m Shell Longs																																						
	7th off cl	9.00	6.75	7.50	8.25	9.38	9.43	-	-	-	-		8.00	6.00	6.67	7.33	8.39	8.25	-	-	-	-			25	16.7	8.3											
	6th off cl	9.00	6.75	7.50	8.25	9.26	9.20	-	-	-	-		8.00	6.00	6.67	7.33	8.30	8.21	-	-	-	-			25	16.7	8.3											
	5th off cl	9.00	6.75	7.50	8.25	9.39	9.47	-	-	-	-		8.00	6.00	6.67	7.33	8.23	8.04	-	-	-	-			25	16.7	8.3											
	4th off cl	9.00	6.75	7.50	8.25	9.58	9.31	-	-	-	-		8.00	6.00	6.67	7.33	8.25	8.02	-	-	-	-	9.00	6.75	7.50	8.25	9.28	9.18	-	-	25	16.7	8.3					
	3rd off cl	9.00	6.75	7.50	8.25	9.40	9.49	-	-	-	-		8.00	6.00	6.67	7.33	8.25	8.40	-	-	-	-	9.00	6.75	7.50	8.25	9.53	9.28	-	-	25	16.7	8.3					
	2nd off cl	9.00	6.75	7.50	8.25	9.42	9.40	-	-	-	-		8.00	6.00	6.67	7.33	8.17	8.17	-	-	-	-	9.00	6.75	7.50	8.25	9.38	9.31	-	-	25	16.7	8.3					
	1st off cl	9.00	6.75	7.50	8.25	9.58	9.34	-	-	-	-		8.00	6.00	6.67	7.33	8.34	8.31	-	-	-	-	9.00	6.75	7.50	8.25	9.38	9.27	-	-	25	16.7	8.3					
	cl	19.00	14.25	15.83	17.42	18.78	18.83	0.22	1.16	0.17	0.89													19.00	14.25	15.83	17.42	19.57	19.51	-	-	25	16.7	8.3				

Operator's Signature:	Surveyor's Signature:
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Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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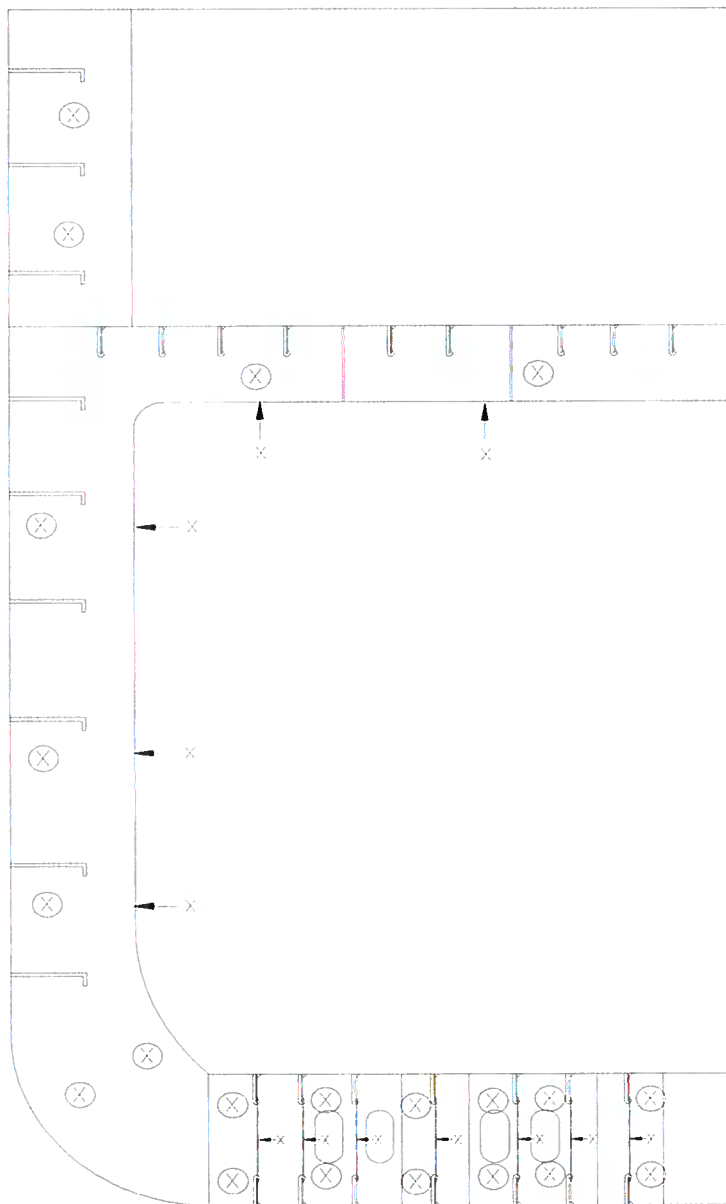
Operator's Signature:	Surveyor's Signature:
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Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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Operator's Signature:	Surveyor's Signature:
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TYPICAL TRANSVERSE SECTION
LOOKING FORWARD - PORT SHOWN STD SIMILAR



**REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS
IN THE CARGO OIL AND WATER BALLAST TANKS**

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK DESCRIPTION:																
Allpeak Tank																
LOCATION OF STRUCTURE:																
Transverse Floors																
STRUCTURAL MEMBER	ITEM	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %		
						P	S	mm	%	mm	%					
Fr. 12																
Plate - ob		20.00	15.00	16.67	18.33	20.16	20.03	-	-	-	-	25	16.7	8.3		
Plate - ib		20.00	15.00	16.67	18.33	20.15	19.82	-	-	0.18	0.90	25	16.7	8.3		
Fr. 11																
Plate - ob		20.00	15.00	16.67	18.33	20.06	20.03	-	-	-	-	25	16.7	8.3		
Plate - ib		20.00	15.00	16.67	18.33	19.70	20.05	0.30	1.50	-	-	25	16.7	8.3		
Fr. 10																
Plate - ob		20.00	15.00	16.67	18.33	19.94	19.39	0.06	0.30	0.61	3.05	25	16.7	8.3		
Plate - ib		20.00	15.00	16.67	18.33	19.95	19.40	0.05	0.25	0.60	3.00	25	16.7	8.3		
Fr. 9																
Plate - ob		20.00	15.00	16.67	18.33	19.40	20.16	0.60	3.00	-	-	25	16.7	8.3		
Plate - ib		20.00	15.00	16.67	18.33	20.14	20.01	-	-	-	-	25	16.7	8.3		
Fr. 8																
Plate - ob		20.00	15.00	16.67	18.33	20.33	20.34	-	-	-	-	25	16.7	8.3		
Plate - ib		20.00	15.00	16.67	18.33	20.06	19.73	-	-	0.27	1.35	25	16.7	8.3		
Fr. 7																
Plate - ob		14.00	10.50	11.67	12.83	14.37	14.85	-	-	-	-	25	16.7	8.3		
Plate - ib		14.00	10.50	11.67	12.83	13.65	14.84	0.35	2.50	-	-	25	16.7	8.3		
Fr. 6																
Plate - ob		14.00	10.50	11.67	12.83	14.43	15.10	-	-	-	-	25	16.7	8.3		
Plate - ib		14.00	10.50	11.67	12.83	15.20	14.43	-	-	-	-	25	16.7	8.3		

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS IN THE CARGO OIL AND WATER BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS IN THE CARGO OIL AND WATER BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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Operator's Signature:	Surveyor's Signature:
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**REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS
IN THE CARGO OIL AND WATER BALLAST TANKS**

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK DESCRIPTION:																
Inner Bottom Tank 3 & 4 - Transverse Floors																
LOCATION OF STRUCTURE:																
Frame 64																
STRUCTURAL MEMBER	ITEM	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %		
						P	S	mm	%	mm	%					
Transverse Floor Plate																
6th off cl - upr		10.00	8.00	8.67	9.33	10.38	10.21	-	-	-	-	20	13.3	6.7		
- lwr		10.00	8.00	8.67	9.33	10.30	10.42	-	-	-	-	20	13.3	6.7		
5th off cl - upr		10.00	8.00	8.67	9.33	10.56	10.36	-	-	-	-	20	13.3	6.7		
- lwr		10.00	8.00	8.67	9.33	10.39	10.55	-	-	-	-	20	13.3	6.7		
4th off cl - upr		10.00	8.00	8.67	9.33	10.53	10.33	-	-	-	-	20	13.3	6.7		
- lwr		10.00	8.00	8.67	9.33	10.41	10.56	-	-	-	-	20	13.3	6.7		
3rd off cl - upr		10.00	8.00	8.67	9.33	10.48	10.19	-	-	-	-	20	13.3	6.7		
- lwr		10.00	8.00	8.67	9.33	10.22	10.46	-	-	-	-	20	13.3	6.7		
2nd off cl - upr		10.00	8.00	8.67	9.33	10.56	10.14	-	-	-	-	20	13.3	6.7		
- lwr		10.00	8.00	8.67	9.33	10.32	10.38	-	-	-	-	20	13.3	6.7		
1st off cl - upr		10.00	8.00	8.67	9.33	10.49	10.12	-	-	-	-	20	13.3	6.7		
- lwr		10.00	8.00	8.67	9.33	10.35	10.27	-	-	-	-	20	13.3	6.7		
Transverse Floor Stiffeners																
7th off cl		8.00	6.00	6.67	7.33	9.12	9.11	-	-	-	-	25	16.7	8.3		
6th off cl		8.00	6.00	6.67	7.33	9.15	9.13	-	-	-	-	25	16.7	8.3		
5th off cl		8.00	6.00	6.67	7.33	8.85	8.21	-	-	-	-	25	16.7	8.3		
4th off cl		8.00	6.00	6.67	7.33	9.00	8.21	-	-	-	-	25	16.7	8.3		
3rd off cl		8.00	6.00	6.67	7.33	8.98	8.26	-	-	-	-	25	16.7	8.3		
2nd off cl		8.00	6.00	6.67	7.33	8.77	9.00	-	-	-	-	25	16.7	8.3		
1st off cl		8.00	6.00	6.67	7.33	9.08	8.15	-	-	-	-	25	16.7	8.3		

Operator's Signature:	Surveyor's Signature:
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**REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS
IN THE CARGO OIL AND WATER BALLAST TANKS**

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK DESCRIPTION: Inner Bottom Tank Sea Chest - Transverse Floors														
LOCATION OF STRUCTURE: Frame 98														
STRUCTURAL MEMBER	ITEM	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
						P	S	mm	%	mm	%			
Transverse Floor Plate														
6th off cl - upr		10.00	8.00	8.67	9.33	10.88	10.46	-	-	-	-	20	13.3	6.7
- lwr		10.00	8.00	8.67	9.33	10.57	10.81	-	-	-	-	20	13.3	6.7
5th off cl - upr		10.00	8.00	8.67	9.33	10.61	10.36	-	-	-	-	20	13.3	6.7
- lwr		10.00	8.00	8.67	9.33	10.86	10.68	-	-	-	-	20	13.3	6.7
4th off cl - upr		10.00	8.00	8.67	9.33	10.61	10.56	-	-	-	-	20	13.3	6.7
- lwr		10.00	8.00	8.67	9.33	10.76	10.73	-	-	-	-	20	13.3	6.7
3rd off cl - upr		10.00	8.00	8.67	9.33	10.41	10.53	-	-	-	-	20	13.3	6.7
- lwr		10.00	8.00	8.67	9.33	10.72	10.78	-	-	-	-	20	13.3	6.7
2nd off cl - upr		10.00	8.00	8.67	9.33	10.31	10.55	-	-	-	-	20	13.3	6.7
- lwr		10.00	8.00	8.67	9.33	10.64	10.82	-	-	-	-	20	13.3	6.7
1st off cl - upr		10.00	8.00	8.67	9.33	10.73	10.61	-	-	-	-	20	13.3	6.7
- lwr		10.00	8.00	8.67	9.33	10.76	10.79	-	-	-	-	20	13.3	6.7
Transverse Floor Stiffeners														
7th off cl		8.00	6.00	6.67	7.33	9.23	9.51	-	-	-	-	25	16.7	8.3
6th off cl		8.00	6.00	6.67	7.33	8.21	8.13	-	-	-	-	25	16.7	8.3
5th off cl		8.00	6.00	6.67	7.33	8.18	7.94	-	-	0.06	0.75	25	16.7	8.3
4th off cl		8.00	6.00	6.67	7.33	8.05	8.08	-	-	-	-	25	16.7	8.3
3rd off cl		8.00	6.00	6.67	7.33	8.07	8.17	-	-	-	-	25	16.7	8.3
2nd off cl		8.00	6.00	6.67	7.33	8.16	7.90	-	-	0.10	1.25	25	16.7	8.3
1st off cl		8.00	6.00	6.67	7.33	8.09	-	-	-	-	-	25	16.7	8.3

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS IN THE CARGO OIL AND WATER BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS IN THE CARGO OIL AND WATER BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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[illegible]

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS IN THE CARGO OIL AND WATER BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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[illegible]

Operator's Signature:	Surveyor's Signature:
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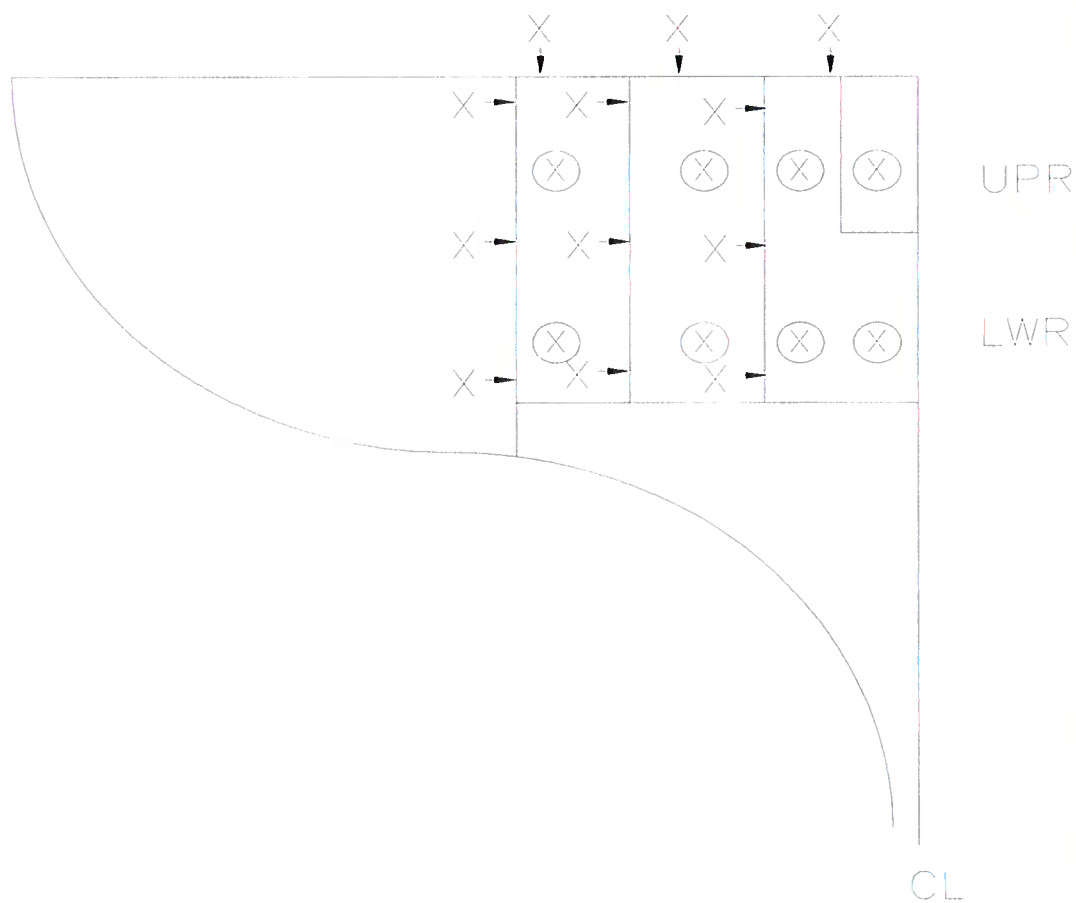
REPORT ON THICKNESS MEASUREMENT OF TRANSVERSE STRUCTURAL MEMBERS IN THE CARGO OIL AND WATER BALLAST TANKS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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Operator's Signature:	Surveyor's Signature:
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MARTHA BLACK
TYPICAL TRANSVERSE SECTION
LOOKING FORWARD -- PORT SHOWN STBD SIMILAR



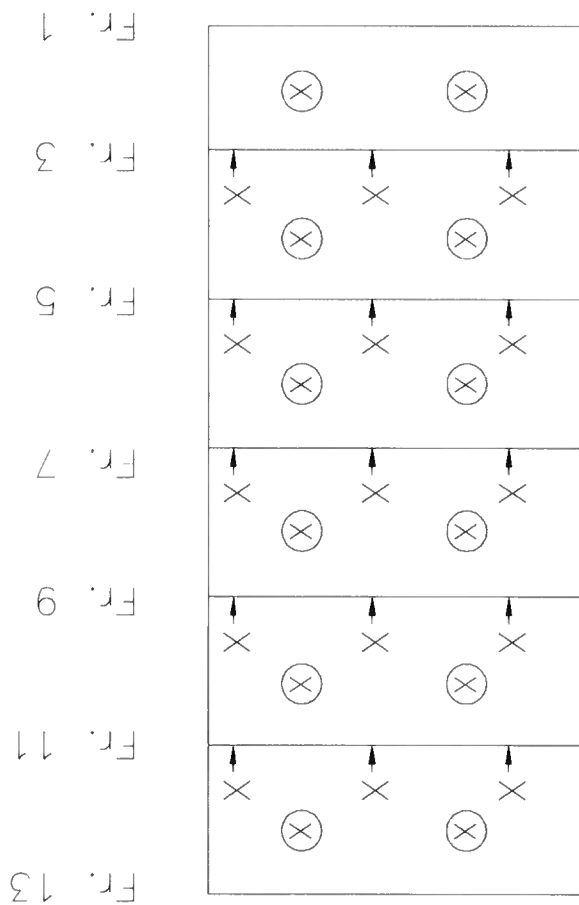
REPORT ON THICKNESS MEASUREMENT OF WATERTIGHT / OIL TIGHT BULKHEADS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK / HOLD DESCRIPTION:		Atpeak Tank													
LOCATION OF STRUCTURE:		Frame 1													
STRUCTURAL MEMBER	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %		
					P	S	mm	%	mm	%					
Plate - Upper Level															
4th ob	9.00	7.20	7.80	8.40	9.35	9.39	-	-	-	-	20	13.3	6.7		
3rd ob	9.00	7.20	7.80	8.40	9.44	8.85	-	-	-	0.15	1.67	20	13.3	6.7	
2nd ob	9.00	7.20	7.80	8.40	8.93	9.30	0.07	0.78	-	-	20	13.3	6.7		
1st ob	9.00	7.20	7.80	8.40	9.33	9.14	-	-	-	-	20	13.3	6.7		
Plate - Lower Level															
4th ob	9.00	7.20	7.80	8.40	9.32	9.54	-	-	-	-	20	13.3	6.7		
3rd ob	9.00	7.20	7.80	8.40	8.50	9.35	0.50	5.56	-	-	20	13.3	6.7		
2nd ob	9.00	7.20	7.80	8.40	9.39	10.28	-	-	-	-	20	13.3	6.7		
1st ob	20.00	16.00	17.33	18.67	20.08	20.09	-	-	-	-	20	13.3	6.7		
Stiffeners and end brackets															
2nd ob - top bkt	10.00	7.50	8.33	9.17	10.84	10.00	-	-	-	-	25	16.7	8.3		
- stiffener	10.00	7.50	8.33	9.17	10.14	9.85	-	-	-	0.15	1.50	25	16.7	8.3	
- lwr bkt	10.00	7.50	8.33	9.17	9.20	9.20	0.80	8.00	0.80	0.80	25	16.7	8.3		
1st ob - top bkt	10.00	7.50	8.33	9.17	9.90	9.91	0.10	1.00	0.09	0.90	25	16.7	8.3		
- stiffener	10.00	7.50	8.33	9.17	10.24	9.38	-	-	-	0.62	6.20	25	16.7	8.3	
- lwr bkt	10.00	7.50	8.33	9.17	9.24	9.63	0.76	7.60	0.37	3.70	25	16.7	8.3		

Operator's Signature:	Surveyor's Signature:
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MARTHA BLACK
TYPICAL TRANSVERSE SECTION
LOOKING to PORT - PORT SHOWN STBD SIMILAR

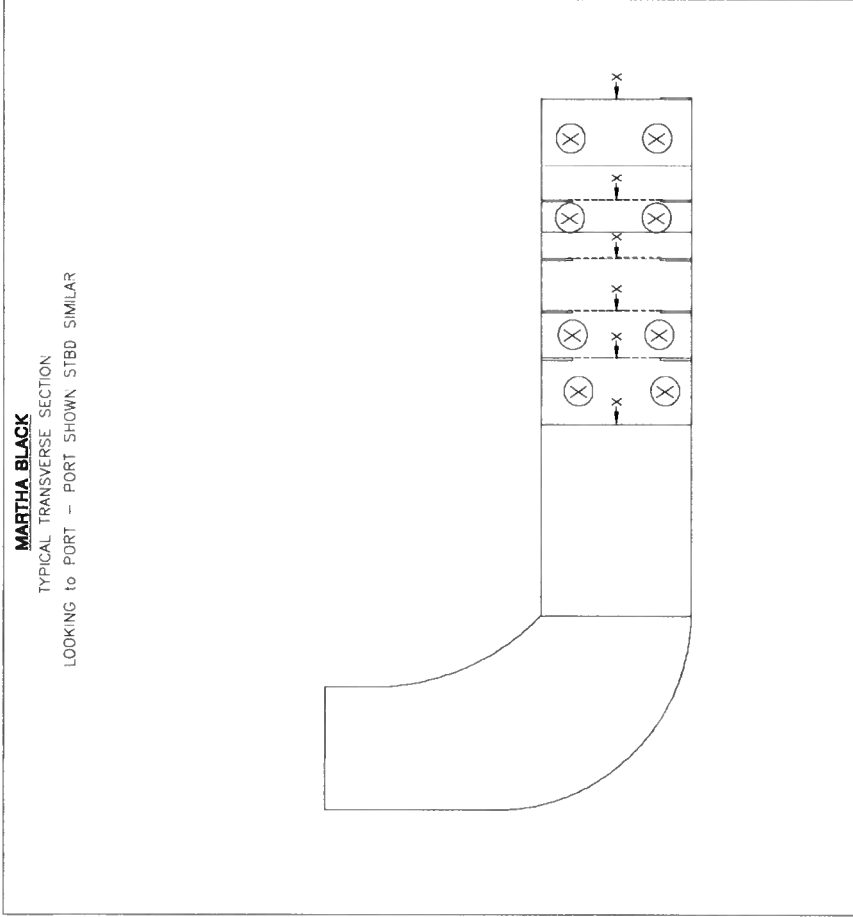


REPORT ON THICKNESS MEASUREMENT OF WATERTIGHT / OIL TIGHT BULKHEADS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK / HOLD DESCRIPTION:		Alfpeak Tank														
LOCATION OF STRUCTURE:		Outboard Bulkhead - Fr. 1 to 13														
STRUCTURAL MEMBER		ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %		
						P	S	mm	%	mm	%					
Plate																
Fr. 12		10.00	8.00	8.67	9.33	10.84	10.80	-	-	-	-	20	13.3	6.7		
Fr. 10		10.00	8.00	8.67	9.33	10.85	10.81	-	-	-	-	20	13.3	6.7		
Fr. 8		10.00	8.00	8.67	9.33	10.74	10.83	-	-	-	-	20	13.3	6.7		
Fr. 6		10.00	8.00	8.67	9.33	10.80	10.86	-	-	-	-	20	13.3	6.7		
Fr. 4		10.00	8.00	8.67	9.33	10.28	10.85	-	-	-	-	20	13.3	6.7		
Fr. 2		10.00	8.00	8.67	9.33	10.81	10.87	-	-	-	-	20	13.3	6.7		
Stiffeners with end brackets																
Fr. 11 - upr bkt		10.00	7.50	8.33	9.17	10.21	10.85	-	-	-	-	25	16.7	8.3		
- stiffener		10.00	7.50	8.33	9.17	10.08	10.24	-	-	-	-	25	16.7	8.3		
- lwr bkt		10.00	7.50	8.33	9.17	9.87	9.83	0.13	1.30	0.17	1.70	25	16.7	8.3		
Fr. 9 - upr bkt		10.00	7.50	8.33	9.17	10.02	9.98	-	-	0.02	0.20	25	16.7	8.3		
- stiffener		10.00	7.50	8.33	9.17	9.39	10.22	0.61	6.10	-	-	25	16.7	8.3		
- lwr bkt		10.00	7.50	8.33	9.17	9.49	9.32	0.51	5.10	0.68	6.80	25	16.7	8.3		
Fr. 7 - upr bkt		10.00	7.50	8.33	9.17	10.23	10.79	-	-	-	-	25	16.7	8.3		
- stiffener		10.00	7.50	8.33	9.17	10.05	10.17	-	-	-	-	25	16.7	8.3		
- lwr bkt		10.00	7.50	8.33	9.17	9.46	9.33	0.54	5.40	0.67	6.70	25	16.7	8.3		
Fr. 5 - upr bkt		10.00	7.50	8.33	9.17	9.96	9.88	0.04	0.40	0.12	1.20	25	16.7	8.3		
- stiffener		10.00	7.50	8.33	9.17	9.89	9.76	0.11	1.10	0.24	2.40	25	16.7	8.3		
- lwr bkt		10.00	7.50	8.33	9.17	10.24	10.30	-	-	-	-	25	16.7	8.3		

Operator's Signature:	Surveyor's Signature:
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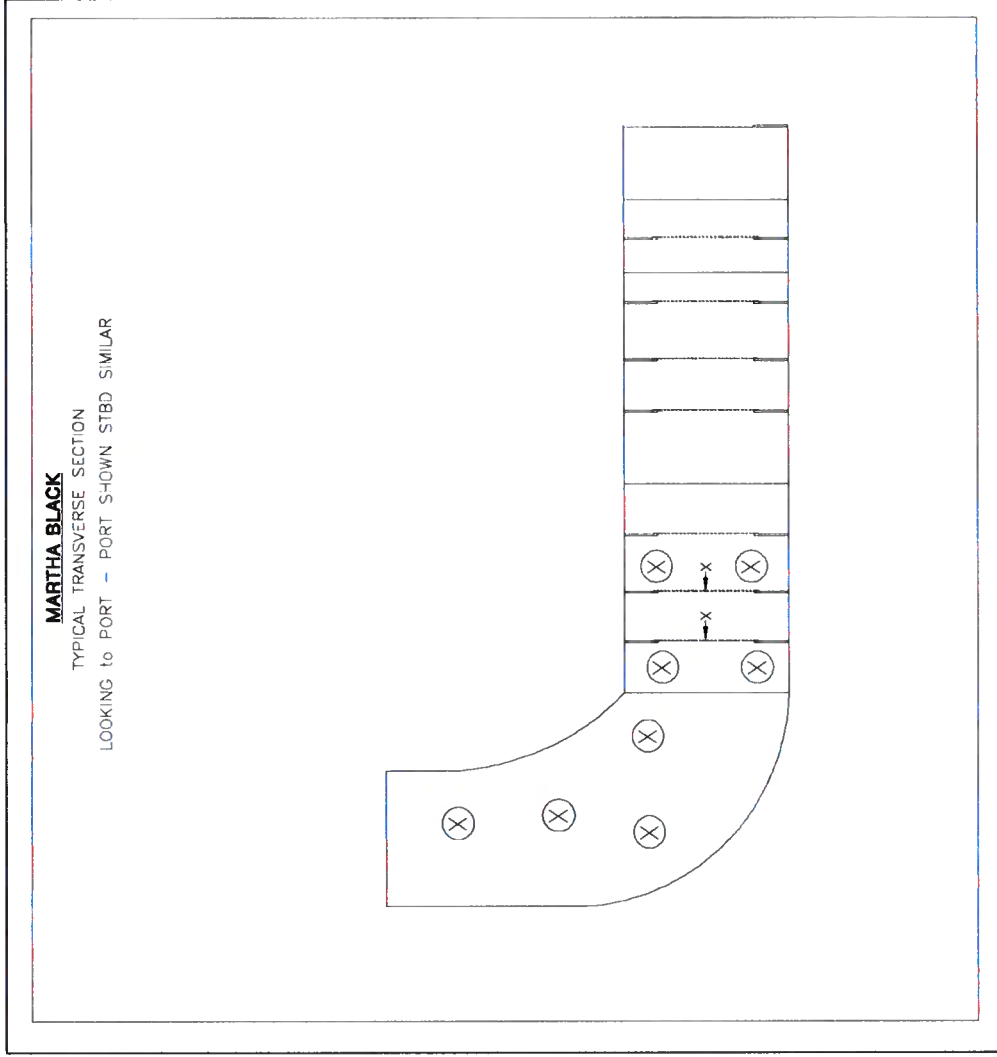


REPORT ON THICKNESS MEASUREMENT OF WATERTIGHT / OIL TIGHT BULKHEADS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK / HOLD DESCRIPTION:		Main Sea Bay											
LOCATION OF STRUCTURE:		Fr. 96 - Aft Bulkhead											
STRUCTURAL MEMBER		ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX 2SS DIM %	MAX 1SS DIM %
						P	S	mm	%	mm	%		
Plate													
5th ob - upr		10.50	8.40	9.10	9.80	10.71	10.71	-	-	-	-	13.3	6.7
5th ob - lwr		10.50	8.40	9.10	9.80	10.86	10.80	-	-	-	-	13.3	6.7
4th ob - upr		10.50	8.40	9.10	9.80	10.79	10.71	-	-	-	-	13.3	6.7
4th ob - lwr		10.50	8.40	9.10	9.80	10.78	10.75	-	-	-	-	13.3	6.7
3rd ob - upr		10.50	8.40	9.10	9.80	10.64	10.69	-	-	-	-	13.3	6.7
3rd ob - lwr		10.50	8.40	9.10	9.80	10.68	10.74	-	-	-	-	13.3	6.7
2nd ob - upr		10.50	8.40	9.10	9.80	10.68	10.72	-	-	-	-	13.3	6.7
2nd ob - lwr		10.50	8.40	9.10	9.80	10.75	10.76	-	-	-	-	13.3	6.7
1st ob - upr		10.50	8.40	9.10	9.80	10.72	10.22	-	-	0.28	2.67	13.3	6.7
1st ob - lwr		10.50	8.40	9.10	9.80	10.25	10.33	0.25	2.38	0.17	1.62	13.3	6.7
Stiffeners													
4th ob		8.00	6.00	6.67	7.33	8.15	8.10	-	-	-	-	16.7	8.3
3rd ob		8.00	6.00	6.67	7.33	8.01	8.20	-	-	-	-	16.7	8.3
2nd ob		8.00	6.00	6.67	7.33	8.06	8.00	-	-	-	-	16.7	8.3
1st ob		8.00	6.00	6.67	7.33	8.06	8.12	-	-	-	-	16.7	8.3
cl		8.00	6.00	6.67	7.33	8.10		-	-	-	-	16.7	8.3

Operator's Signature:	Surveyor's Signature:
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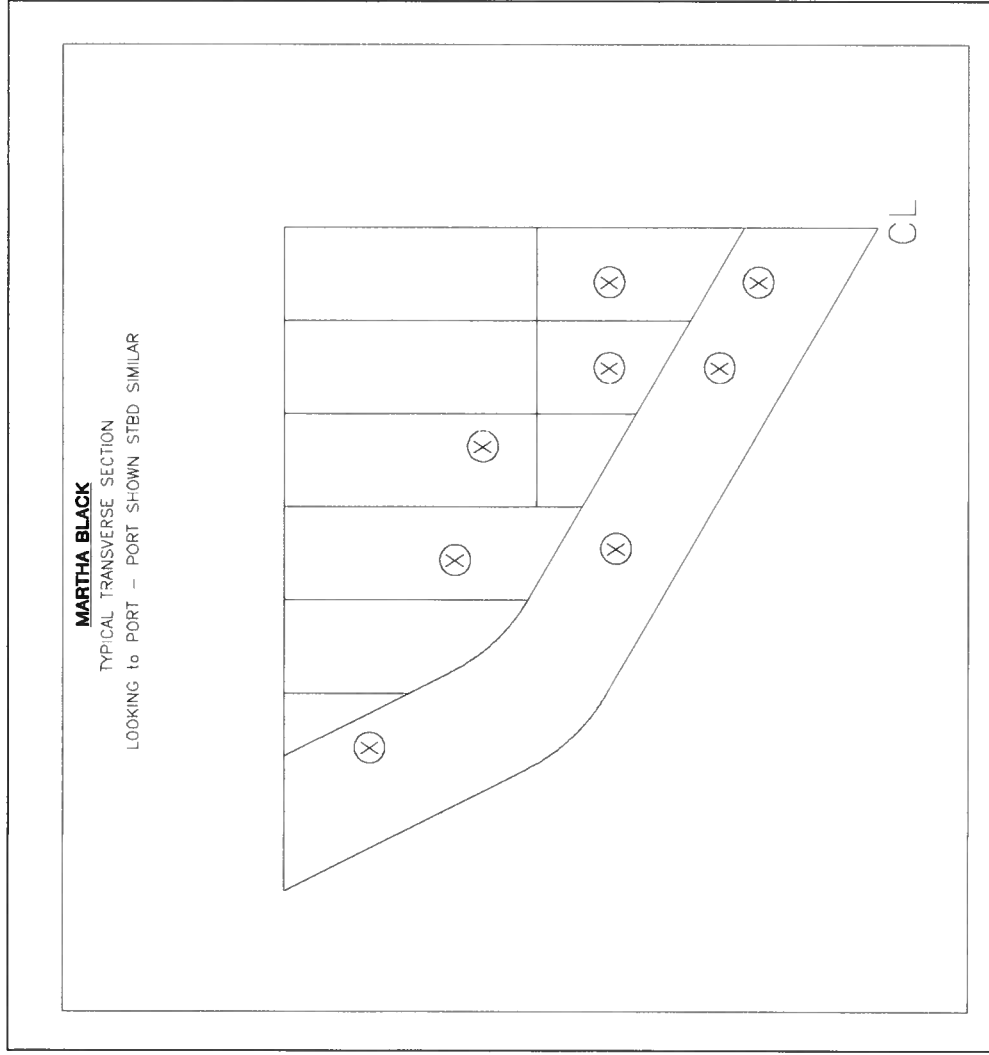


REPORT ON THICKNESS MEASUREMENT OF WATERTIGHT / OIL TIGHT BULKHEADS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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TANK / HOLD DESCRIPTION:		Low & High Sea Chest											
LOCATION OF STRUCTURE:		Fr. 96 - Aft Bulkhead											
STRUCTURAL MEMBER	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S	mm	%	mm	%			
Low Sea Chest													
Plate													
2nd ob - upr	12.50	10.00	10.83	11.67	12.68	12.68	-	-	-	-	20	13.3	6.7
2nd ob - lwr	12.50	10.00	10.83	11.67	12.84	12.90	-	-	-	-	20	13.3	6.7
1st ob - upr	12.50	10.00	10.83	11.67	12.65	12.59	-	-	-	-	20	13.3	6.7
1st ob - lwr	12.50	10.00	10.83	11.67	12.87	12.84	-	-	-	-	20	13.3	6.7
Stiffeners													
2nd ob	8.00	6.00	6.67	7.33	9.17	9.55	-	-	-	-	25	16.7	8.3
1st ob	8.00	6.00	6.67	7.33	8.08	8.54	-	-	-	-	25	16.7	8.3
High Sea Chest													
Plate													
4th ab	12.50	10.00	10.83	11.67	12.91	12.93	-	-	-	-	20	13.3	6.7
3rd ab	12.50	10.00	10.83	11.67	12.83	12.87	-	-	-	-	20	13.3	6.7
2nd ab	12.50	10.00	10.83	11.67	12.46	12.83	0.04	0.32	-	-	20	13.3	6.7
1st ab	12.50	10.00	10.83	11.67	12.51	12.42	-	-	0.08	0.64	20	13.3	6.7

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black		IMO Number: 8320432		Report Number: DNV-									
STRUCTURAL MEMBER: Overboard Discharges													
LOCATION OF STRUCTURE: Side Shell Plating													
DESCRIPTION	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION		DIMINUTION		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S	mm	%	P	S			
Fr. 181 - Bilge o/b													
aft	11.00	8.80	9.53	10.27	11.25		-	-			20	13.3	6.7
upr	11.00	8.80	9.53	10.27	11.04		-	-			20	13.3	6.7
fwd	11.00	8.80	9.53	10.27	10.95		0.05	0.45			20	13.3	6.7
lwr	11.00	8.80	9.53	10.27	11.35		-	-			20	13.3	6.7
Fr. 19 - Sewage o/b													
aft	19.00	15.20	16.47	17.73		19.07		-	-		20	13.3	6.7
upr	19.00	15.20	16.47	17.73		19.28		-	-		20	13.3	6.7
fwd	19.00	15.20	16.47	17.73		18.74		0.26	1.37		20	13.3	6.7
lwr	19.00	15.20	16.47	17.73		19.27		-	-		20	13.3	6.7
Fr. 10 - Bilge o/b													
aft	14.00	11.20	12.13	13.07	14.52		-	-			20	13.3	6.7
upr	14.00	11.20	12.13	13.07	14.87		-	-			20	13.3	6.7
fwd	14.00	11.20	12.13	13.07	15.01		-	-			20	13.3	6.7
lwr	14.00	11.20	12.13	13.07	14.26		-	-			20	13.3	6.7
Fr. 95 - Bilge & Ballast o/b													
aft	19.00	15.20	16.47	17.73		19.24		-	-		20	13.3	6.7
upr	19.00	15.20	16.47	17.73		18.76		0.24	1.26		20	13.3	6.7
fwd	19.00	15.20	16.47	17.73		19.11		-	-		20	13.3	6.7
lwr	19.00	15.20	16.47	17.73		19.32		-	-		20	13.3	6.7

Upr

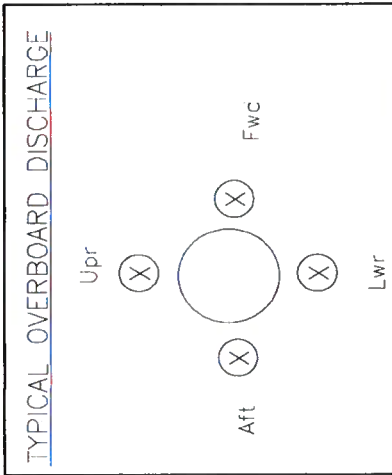
Aft

Fwc

Lwr

TYPICAL OVERBOARD DISCHARGE

SKETCH



Operator's Signature: _____

Surveyor's Signature: _____

REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black		IMO Number:		8320432		Report Number: DNV-					
STRUCTURAL MEMBER: Overboard Discharges											
LOCATION OF STRUCTURE: Side Shell Plating											
DESCRIPTION	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P mm	DIMINUTION S mm	MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S					
Fr. 94 - SW Cooling o/b											
aft	19.00	15.20	16.47	17.73		17.93		1.07	5.63	20	13.3
upr	19.00	15.20	16.47	17.73		19.40		-	-	20	13.3
fwd	19.00	15.20	16.47	17.73		19.33		-	-	20	13.3
lwr	19.00	15.20	16.47	17.73		18.69		0.31	1.63	20	13.3
Fr. 72 - Boiler o/b											
aft	19.00	15.20	16.47	17.73		18.56		0.44	2.32	20	13.3
upr	19.00	15.20	16.47	17.73		19.07		-	-	20	13.3
fwd	19.00	15.20	16.47	17.73		18.36		0.64	3.37	20	13.3
lwr	19.00	15.20	16.47	17.73		18.88		0.12	0.63	20	13.3
Fr. 38 - Bilge pump o/b											
aft	24.00	19.20	20.80	22.40	24.08	-	-			20	13.3
upr	24.00	19.20	20.80	22.40	23.93		0.07	0.29		20	13.3
fwd	24.00	19.20	20.80	22.40	23.93		0.07	0.29		20	13.3
lwr	24.00	19.20	20.80	22.40	23.82		0.18	0.75		20	13.3
Fr. 31 - Oily Bilge o/b											
aft	24.00	19.20	20.80	22.40	23.36		0.64	2.67		20	13.3
upr	24.00	19.20	20.80	22.40	23.38		0.62	2.58		20	13.3
fwd	24.00	19.20	20.80	22.40	23.99		0.01	0.04		20	13.3
lwr	24.00	19.20	20.80	22.40	24.12		-	-		20	13.3

TYPICAL OVERBOARD DISCHARGE

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black		IMO Number: 8320432		Report Number: DNV-									
STRUCTURAL MEMBER: Aft Sea Chest													
LOCATION OF STRUCTURE: Fr. 51-53													
DESCRIPTION	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION		DIMINUTION		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S	P	S	P	S			
Side Shell Plate													
Aft	19.00	15.20	16.47	17.73	19.06						20	13.3	6.7
Fwd	19.00	15.20	16.47	17.73	19.07						20	13.3	6.7
Inboard	19.00	15.20	16.47	17.73	18.18			0.82	4.32		20	13.3	6.7
Outboard	19.00	15.20	16.47	17.73	18.92			0.08	0.42		20	13.3	6.7
Inboard Girder/Bhd													
Upr	20.00	16.00	17.33	18.67	20.14			-	-		20	13.3	6.7
Lwr	20.00	16.00	17.33	18.67	20.19			-	-		20	13.3	6.7
Fwd Bulkhead - Fr. 53													
Inboard	17.00	13.60	14.73	15.87	17.98			-	-		20	13.3	6.7
Outboard	17.00	13.60	14.73	15.87	18.36			-	-		20	13.3	6.7
Aft Bulkhead - Fr. 51													
Inboard	17.00	13.60	14.73	15.87	17.94			-	-		20	13.3	6.7
Outboard	17.00	13.60	14.73	15.87	18.09			-	-		20	13.3	6.7
Top Plate (tanktop)													
Inboard	12.50	10.00	10.83	11.67	12.39			0.11	0.88		20	13.3	6.7
Outboard	12.50	10.00	10.83	11.67	12.17			0.33	2.64		20	13.3	6.7

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black		IMO Number: 8320432		Report Number: DNV-									
STRUCTURAL MEMBER: LOCATION OF STRUCTURE: Officers Deck		Exposed Deck Plating											
DESCRIPTION	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION		DIMINUTION		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S	P	S	P	S			
Plate 1 - aft	7.00	5.60	6.07	6.53	7.17	7.24	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.09	7.32	-	-	-	-	20	13.3	6.7
Plate 2 - aft	7.00	5.60	6.07	6.53	7.19	7.25	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.11	7.49	-	-	-	-	20	13.3	6.7
Plate 3 - aft	7.00	5.60	6.07	6.53	7.38	7.08	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.71	6.97	-	0.03	0.43	-	20	13.3	6.7
Plate 4 - aft	7.00	5.60	6.07	6.53	7.27	7.08	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.31	7.31	-	-	-	-	20	13.3	6.7
Plate 5 - aft	7.00	5.60	6.07	6.53	7.36	7.22	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.39	7.22	-	-	-	-	20	13.3	6.7
Plate 6 - aft	7.00	5.60	6.07	6.53	7.41	7.19	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.30	7.23	-	-	-	-	20	13.3	6.7
Plate 7 - aft	7.00	5.60	6.07	6.53	7.24	-	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.25	-	-	-	-	-	20	13.3	6.7
Plate 8 - aft	7.00	5.60	6.07	6.53	7.07	-	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.19	-	-	-	-	-	20	13.3	6.7
Plate 9 - aft	7.00	5.60	6.07	6.53	7.16	-	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.07	-	-	-	-	-	20	13.3	6.7
Plate 10 - aft	7.00	5.60	6.07	6.53	7.26	-	-	-	-	-	20	13.3	6.7
fwd	7.00	5.60	6.07	6.53	7.23	-	-	-	-	-	20	13.3	6.7

PORT

OFFICERS DECK

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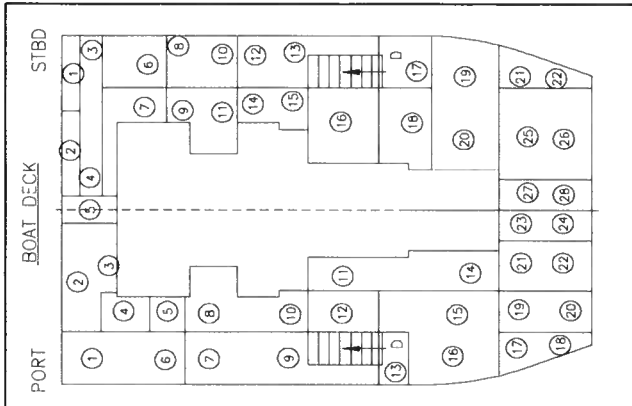
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Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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STRUCTURAL MEMBER:		Exposed Deck Plating										SKETCH	
LOCATION OF STRUCTURE: Boat Deck													
DESCRIPTION	ORG. THK. mm	Class THK. Min. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S	mm	%	mm	%			
Reading 1	8.00	6.40	6.93	7.47	10.10	8.15	-	-	-	-	20	13.3	6.7
Reading 2	8.00	6.40	6.93	7.47	8.34	8.18	-	-	-	-	20	13.3	6.7
Reading 3	8.00	6.40	6.93	7.47	8.34	8.10	-	-	-	-	20	13.3	6.7
Reading 4	8.00	6.40	6.93	7.47	8.18	8.16	-	-	-	-	20	13.3	6.7
Reading 5	8.00	6.40	6.93	7.47	8.08	8.26	-	-	-	-	20	13.3	6.7
Reading 6	8.00	6.40	6.93	7.47	10.18	8.34	-	-	-	-	20	13.3	6.7
Reading 7	8.00	6.40	6.93	7.47	9.58	7.99	-	-	0.01	0.12	20	13.3	6.7
Reading 8	8.00	6.40	6.93	7.47	9.16	10.15	-	-	-	-	20	13.3	6.7
Reading 9	8.00	6.40	6.93	7.47	9.14	8.32	-	-	-	-	20	13.3	6.7
Reading 10	10.00	8.00	8.67	9.33	9.49	10.01	0.51	5.10	-	-	20	13.3	6.7
Reading 11	10.00	8.00	8.67	9.33	9.37	9.90	0.63	6.30	0.10	1.00	20	13.3	6.7
Reading 12	10.00	8.00	8.67	9.33	15.30	9.35	-	-	0.65	6.50	20	13.3	6.7
Reading 13	10.00	8.00	8.67	9.33	9.38	9.41	0.62	6.20	0.59	5.90	20	13.3	6.7
Reading 14	10.00	8.00	8.67	9.33	10.03	9.46	-	-	0.54	5.40	20	13.3	6.7
Reading 15	10.00	8.00	8.67	9.33	10.03	9.37	-	-	0.63	6.30	20	13.3	6.7
Reading 16	10.00	8.00	8.67	9.33	9.89	15.45	0.11	1.10	-	-	20	13.3	6.7
Reading 17	10.00	8.00	8.67	9.33	9.93	9.39	0.07	0.70	0.61	6.10	20	13.3	6.7
Reading 18	10.00	8.00	8.67	9.33	9.92	9.40	0.08	0.80	0.60	6.00	20	13.3	6.7
Reading 19	10.00	8.00	8.67	9.33	9.99	9.99	0.01	0.10	0.01	0.10	20	13.3	6.7
Reading 20	10.00	8.00	8.67	9.33	9.98	10.10	0.02	0.20	-	-	20	13.3	6.7



Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black		IMO Number: 8320432		Report Number: DNV-	
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STRUCTURAL MEMBER: Exposed Deck Plating												SKETCH	
LOCATION OF STRUCTURE: Upper Deck													
DESCRIPTION	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION P		DIMINUTION S		MAX ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %
					P	S	mm	%	mm	%			
Reading 1	8.00	6.40	6.93	7.47	8.25	8.38	-	-	-	-	20	13.3	6.7
Reading 2	8.00	6.40	6.93	7.47	8.22	8.37	-	-	-	-	20	13.3	6.7
Reading 3	8.00	6.40	6.93	7.47	8.42	8.39	-	-	-	-	20	13.3	6.7
Reading 4	8.00	6.40	6.93	7.47	8.25	8.33	-	-	-	-	20	13.3	6.7
Reading 5	8.00	6.40	6.93	7.47	8.74	8.41	-	-	-	-	20	13.3	6.7
Reading 6	8.00	6.40	6.93	7.47	8.27	8.62	-	-	-	-	20	13.3	6.7
Reading 7	8.00	6.40	6.93	7.47	8.24	8.17	-	-	-	-	20	13.3	6.7
Reading 8	8.00	6.40	6.93	7.47	8.22	8.51	-	-	-	-	20	13.3	6.7
Reading 9	8.00	6.40	6.93	7.47	8.34	8.24	-	-	-	-	20	13.3	6.7
Reading 10	8.00	6.40	6.93	7.47	8.38	8.35	-	-	-	-	20	13.3	6.7
Reading 11	8.00	6.40	6.93	7.47	9.91	9.58	-	-	-	-	20	13.3	6.7
Reading 12	8.00	6.40	6.93	7.47	9.59	9.58	-	-	-	-	20	13.3	6.7
Reading 13	12.00	9.60	10.40	11.20	12.56	12.64	-	-	-	-	20	13.3	6.7
Reading 14	12.00	9.60	10.40	11.20	12.51	12.69	-	-	-	-	20	13.3	6.7
Reading 15	12.00	9.60	10.40	11.20	12.49	12.52	-	-	-	-	20	13.3	6.7
Reading 16	12.00	9.60	10.40	11.20	12.46	12.57	-	-	-	-	20	13.3	6.7
Reading 17	8.00	6.40	6.93	7.47	8.38	8.23	-	-	-	-	20	13.3	6.7
Reading 18	8.00	6.40	6.93	7.47	8.23	8.34	-	-	-	-	20	13.3	6.7
Reading 19	12.00	9.60	10.40	11.20	12.36	12.79	-	-	-	-	20	13.3	6.7
Reading 20	12.00	9.60	10.40	11.20	12.45	12.82	-	-	-	-	20	13.3	6.7

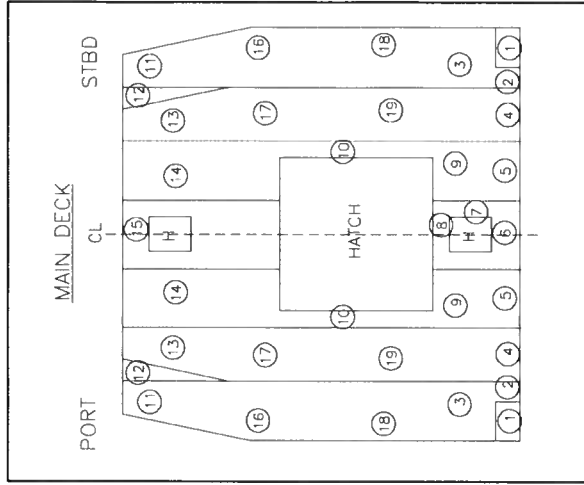
Operator's Signature:

Surveyor's Signature:

REPORT ON THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURES

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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STRUCTURAL MEMBER: Exposed Deck Plating										SKETCH			
LOCATION OF STRUCTURE: Main Deck													
DESCRIPTION	ORG. THK. mm	Class Min. THK. mm	Class 2SS mm	Class 1SS mm	GAUGED		DIMINUTION		DIMINUTION S	ALLOW DIM %	MAX 2SS DIM %	MAX 1SS DIM %	
					P	S	mm	%					
Reading 1	12.00	9.60	10.40	11.20	12.29	12.03	-	-	-	20	13.3	6.7	
Reading 2	12.00	9.60	10.40	11.20	12.03	11.97	-	-	0.03	20	13.3	6.7	
Reading 3	20.00	16.00	17.33	18.67	20.18	20.31	-	-	-	20	13.3	6.7	
Reading 4	12.00	9.60	10.40	11.20	12.40	12.39	-	-	-	20	13.3	6.7	
Reading 5	12.00	9.60	10.40	11.20	12.01	12.25	-	-	-	20	13.3	6.7	
Reading 6	12.00	9.60	10.40	11.20	12.23	-	-	-	-	20	13.3	6.7	
Reading 7	12.00	9.60	10.40	11.20	12.30	-	-	-	-	20	13.3	6.7	
Reading 8	12.00	9.60	10.40	11.20	11.96	-	0.04	0.33	-	20	13.3	6.7	
Reading 9	12.00	9.60	10.40	11.20	12.73	12.36	-	-	-	20	13.3	6.7	
Reading 10	12.00	9.60	10.40	11.20	12.14	12.31	-	-	-	20	13.3	6.7	
Reading 11	12.00	9.60	10.40	11.20	11.94	12.94	0.06	0.50	-	20	13.3	6.7	
Reading 12	12.00	9.60	10.40	11.20	12.81	12.78	-	-	-	20	13.3	6.7	
Reading 13	12.00	9.60	10.40	11.20	12.79	12.61	-	-	-	20	13.3	6.7	
Reading 14	12.00	9.60	10.40	11.20	12.65	12.88	-	-	-	20	13.3	6.7	
Reading 15	12.00	9.60	10.40	11.20	11.48	12.43	0.52	4.33	-	20	13.3	6.7	
Reading 16	12.00	9.60	10.40	11.20	12.77	12.13	-	-	-	20	13.3	6.7	
Reading 17	12.00	9.60	10.40	11.20	12.34	12.28	-	-	-	20	13.3	6.7	
Reading 18	12.00	9.60	10.40	11.20	12.29	12.16	-	-	-	20	13.3	6.7	
Reading 19	12.00	9.60	10.40	11.20	11.90	11.98	0.10	0.83	0.02	0.17	20	13.3	6.7



Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT - TOPSIDE AND BOTTOM AREA ASSESSMENTS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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FIRST TRANSVERSE SECTION AT FRAME 64													
TOPSIDE AREAS							BOTTOM AREAS						
PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT	PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT
	P	S	P	P	S			P	S	P	P	S	
Stringer Plate Thickness						% Diminution	Keel Plate Thickness	15.00	15.00	14.97	14.78	% Diminution	
Total Deck Plate Thickness						Port:	Total Bottom Shell Thickness	36.00	36.00	35.05	35.87	Port:	
Sheerstrake Thickness	24.00	24.00	23.59	24.15		1.71	Total Bilge Thickness	12.00	12.00	11.79	11.96	1.89	
						% Diminution						% Diminution	
						Starboard:						Starboard:	
						-							
						Mean:						Mean:	
TOTAL	24.00	24.00	23.59	24.15		0.54	TOTAL	63.00	63.00	61.81	62.61	1.25	
LONGITUDINAL MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT	PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT
	P	S	P	P	S			P	S	P	P	S	
Total Deck Longitudinal Thickness						% Diminution	Total Bottom Longitudinal Thickness	82.00	82.00	84.79	84.47	% Diminution	
Total Deck Girder Thickness						Port:	Total Bottom Girder Thickness	39.00	39.00	40.58	40.56	Port:	
Longitudinal Bhd Tck (Upper Strake)	8.00	8.00	8.23	8.23		-	Longitudinal Bhd Tck (Lower Strake)					-	
Total Sheerstrake Longitudinal Tck						% Diminution	Total Bilge Longitudinal Tck					% Diminution	
						Starboard:						Starboard:	
						-						-	
						Mean:						Mean:	
TOTAL	8.00	8.00	8.23	8.23		8.23	TOTAL	121.00	121.00	125.37	125.03	-	

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT - TOPSIDE AND BOTTOM AREA ASSESSMENTS

Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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SECOND TRANSVERSE SECTION AT FRAME 98													
TOPSIDE AREAS							BOTTOM AREAS						
PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS		ASSESSMENT	PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS		ASSESSMENT		
	P	S	P	S			P	S	P	S			
Stringer Plate Thickness					% Diminution	Keel Plate Thickness	17.00	17.00	17.36	17.29	% Diminution		
Total Deck Plate Thickness					Port:	Total Bottom Shell Thickness	50.00	50.00	50.05	49.68	Port:		
Sheerstrake Thickness	24.00	24.00	24.51	24.19	% Diminution	Total Bilge Thickness	17.00	17.00	16.57	16.59	0.02		
					% Diminution						% Diminution		
					Starboard:						Starboard:		
					-						-		
					Mean:						Mean:		
TOTAL	24.00	24.00	24.51	24.19	-	TOTAL	84.00	84.00	83.98	83.56	0.27		
LONGITUDINAL MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS		ASSESSMENT	PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS		ASSESSMENT		
	P	S	P	S			P	S	P	S			
Total Deck Longitudinal Thickness					% Diminution	Total Bottom Longitudinal Thickness	56.00	56.00	57.93	57.40	% Diminution		
Total Deck Girder Thickness					Port:	Total Bottom Girder Thickness	63.50	63.50	63.85	63.34	Port:		
Longitudinal Bhd Tck (Upper Strake)	12.50	12.50	12.83	12.84	-	Longitudinal Bhd Tck (Lower Strake)					-		
Total Sheerstrake Longitudinal Tck					% Diminution	Total Bilge Longitudinal Tck					% Diminution		
					Starboard:						Starboard:		
					-						-		
					Mean:						Mean:		
TOTAL	12.50	12.50	12.83	12.84	-	TOTAL	119.50	119.50	121.78	120.74	-		

Operator's Signature:	Surveyor's Signature:
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REPORT ON THICKNESS MEASUREMENT - TOPSIDE AND BOTTOM AREA ASSESSMENTS

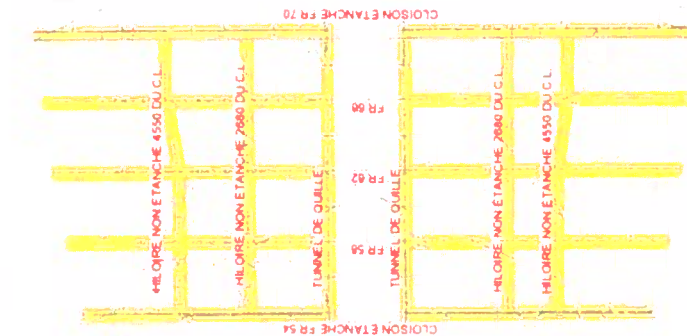
Ships Name: Martha Black	IMO Number: 8320432	Report Number: DNV-
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THIRD TRANSVERSE SECTION AT FRAME 134													
TOPSIDE AREAS						BOTTOM AREAS							
PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT	PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT
	P	S	P	S	P			S	P	S	P	S	
Stringer Plate Thickness						% Diminution	Keel Plate Thickness	15.00	15.00	14.83	14.21	% Diminution	
Total Deck Plate Thickness						Port:	Total Bottom Shell Thickness	36.00	36.00	35.40	34.69	Port:	
Sheerstrake Thickness	24.00	24.00	24.02	24.54	-		Total Bilge Thickness	12.00	12.00	11.34	11.66	2.27	
						% Diminution						% Diminution	
						Starboard:						Starboard:	
						-							
						Mean:						Mean:	
TOTAL	24.00	24.00	24.02	24.54	-		TOTAL	63.00	63.00	61.57	60.56	3.07	
LONGITUDINAL MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT	PLATING MEMBERS	ORIGINAL THICKNESS		MEASURED THICKNESS			ASSESSMENT
	P	S	P	S	P			S	P	S	P	S	
Total Deck Longitudinal Thickness						% Diminution	Total Bottom Longitudinal Thickness	55.00	55.00	57.16	56.55	% Diminution	
Total Deck Girder Thickness						Port:	Total Bottom Girder Thickness	30.00	30.00	30.69	31.07	Port:	
Longitudinal Bhd Tck (Upper Strake)							Longitudinal Bhd Tck (Lower Strake)					-	
Total Sheerstrake Longitudinal Tck						% Diminution	Total Bilge Longitudinal Tck					% Diminution	
						Starboard:						Starboard:	
						Mean:						Mean:	
TOTAL	0.00	0.00	0.00	0.00	0.00		TOTAL	85.00	85.00	87.85	87.62	-	

Operator's Signature:	Surveyor's Signature:
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Thickness Measurement

CCG Additional Measurements



HILOIRE NON ÉTANCHE TYPIQUE



TUNNEL DE QUILLE



Longitudinal Girder 2680 off CL							
NUM	LOCATION	ORG.		Gauged		DIFF %	MAX 2SS DIM %
		THK. mm	THK. mm	THK. mm	THK. mm		
01	Fr. 54 to 70(P)	9.00	9.32	-	13.3	-	13.3
02	Fr. 54 to 70(P)	9.00	9.27	-	13.3	-	13.3
03	Fr. 54 to 70(P)	9.00	9.27	-	13.3	-	13.3
04	Fr. 54 to 70(P)	9.00	9.17	-	13.3	-	13.3
05	Fr. 54 to 70(P)	9.00	9.96	-	12.2	-	12.2

Longitudinal Girder 2680 off CL					
NUM	LOCATION	ORG.		Gauged	
		THK. mm	THK. mm	DIFF %	MAX 2SS DIM. %
01	Fr. 54 to 70(S)	9.00	9.44	-	13.3
02	Fr. 54 to 70(S)	9.00	9.34	-	13.3
03	Fr. 54 to 70(S)	9.00	9.36	-	13.3
04	Fr. 54 to 70(S)	9.00	9.34	-	13.3
05	Fr. 54 to 70(S)	9.00	9.30	-	13.3

Longitudinal Girder 4500 off CL						
NUM	LOCATION	ORG.		Gauged		MAX 2SS DIM%
		THK. mm	THK mm	DIFF %		
01	Fr. 54 to 70(P)	9.00	9.42	-	13.3	
02	Fr. 54 to 70(P)	9.00	10.06	-	13.3	
03	Fr. 54 to 70(P)	9.00	9.37	-	13.3	
04	Fr. 54 to 70(P)	9.00	9.42	-	13.3	
05	Fr. 54 to 70(P)	9.00	9.50	-	13.3	

Longitudinal Girder 4500 off CL						
NUM	LOCATION	ORG.		Gauged		MAX 2SS DIM. %
		THK. mm	THK. mm	DIFF %		
01	Fr. 54 to 70(S)	9.00	9.48	-	13.3	
02	Fr. 54 to 70(S)	9.00	9.42	-	13.3	
03	Fr. 54 to 70(S)	9.00	9.42	-	13.3	
04	Fr. 54 to 70(S)	9.00	9.45	-	13.3	
05	Fr. 54 to 70(S)	9.00	9.35	-	12.2	

Longitudinal Girder Watertight Cable Tunnel						
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 54 to 70 (P)	12.00	12.00	12.37	-	13.3
02	Fr. 54 to 70 (P)	12.00	12.00	12.29	-	13.3
03	Fr. 54 to 70 (P)	12.00	12.00	12.32	-	13.3
04	Fr. 54 to 70 (P)	12.00	12.00	12.37	-	13.3
05	Fr. 54 to 70 (P)	12.00	12.00	12.40	-	13.2

Longitudinal Girder Watertight Cable Tunnel						
NUM	LOCATION	THK. mm	ORG. Gauged mm	THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 54 to 70(S)	12.00	12.00	12.39	-	13.3
02	Fr. 54 to 70(S)	12.00	12.00	12.42	-	13.3
03	Fr. 54 to 70(S)	12.00	12.00	12.42	-	13.3
04	Fr. 54 to 70(S)	12.00	12.00	12.44	-	13.3
05	Fr. 54 to 70(S)	12.00	12.00	12.47	-	13.2

ELEMENTS DE STRUCTURE A VERIFIER

PLAN DOUBLE-FOND
RÉSERVOIRS #3 ET #4

REFERENCES	
FRAMING EXPANSION	H-0002
TANK TOP & DOUBLE BOTTOM	H-0003
W.T. BULKHEAD	H-0006
DOCKING PLAN	H-0022

VARANGUE FR. 58-62-66

Transverse Floor Fr. 58					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 58(P)	10.00	10.26	-	13.3
02	Fr. 58(P)	10.00	10.13	-	13.3
03	Fr. 58(P)	10.00	10.72	-	13.3
04	Fr. 58(P)	10.00	10.26	-	13.3
05	Fr. 58(P)	10.00	10.39	-	13.3

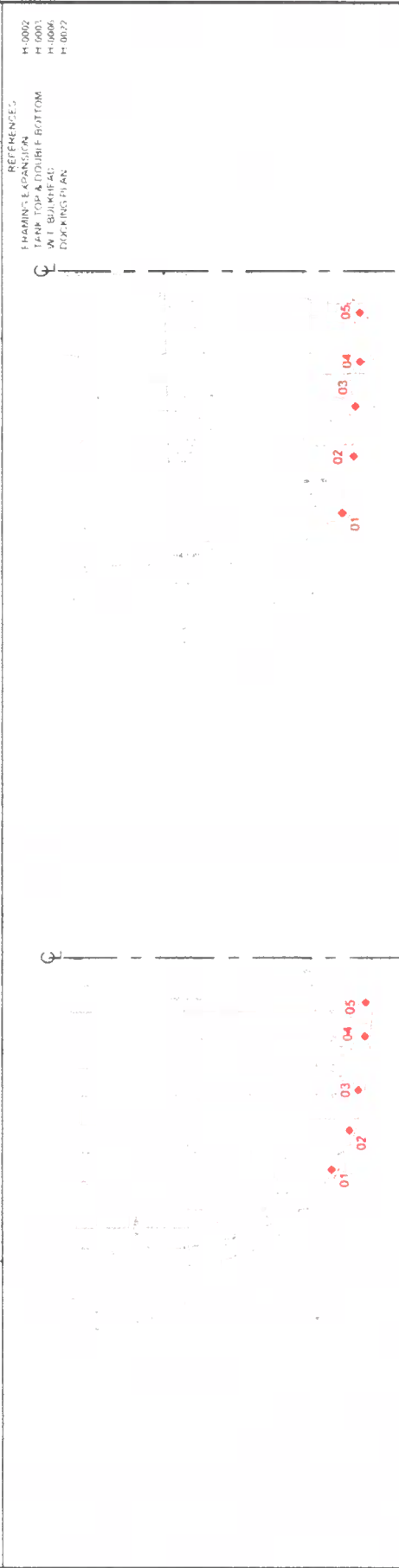
Transverse Floor Fr. 62					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 62(P)	10.00	10.31	-	13.3
02	Fr. 62(P)	10.00	10.31	-	13.3
03	Fr. 62(P)	10.00	10.31	-	13.3
04	Fr. 62(P)	10.00	10.24	-	13.3
05	Fr. 62(P)	10.00	10.85	-	13.3

Transverse Floor Fr. 66					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 66(P)	10.00	10.19	-	13.3
02	Fr. 66(P)	10.00	10.03	-	13.3
03	Fr. 66(P)	10.00	10.72	-	13.3
04	Fr. 66(P)	10.00	10.03	-	13.3
05	Fr. 66(P)	10.00	10.11	-	13.3

Transverse Floor Fr. 58					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 58(S)	10.00	10.23	-	13.3
02	Fr. 58(S)	10.00	10.38	-	13.3
03	Fr. 58(S)	10.00	10.32	-	13.3
04	Fr. 58(S)	10.00	10.26	-	13.3
05	Fr. 58(S)	10.00	10.26	-	13.3

Transverse Floor Fr. 62					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 62(S)	10.00	10.42	-	13.3
02	Fr. 62(S)	10.00	10.59	-	13.3
03	Fr. 62(S)	10.00	10.53	-	13.3
04	Fr. 62(S)	10.00	10.38	-	13.3
05	Fr. 62(S)	10.00	10.32	-	13.3

Transverse Floor Fr. 66					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 66(S)	10.00	10.07	-	13.3
02	Fr. 66(S)	10.00	10.10	-	13.3
03	Fr. 66(S)	10.00	10.11	-	13.3
04	Fr. 66(S)	10.00	10.14	-	13.3
05	Fr. 66(S)	10.00	10.37	-	13.3



CLOISON ETANCHE FR. 54

CLOISON ETANCHE FR. 70

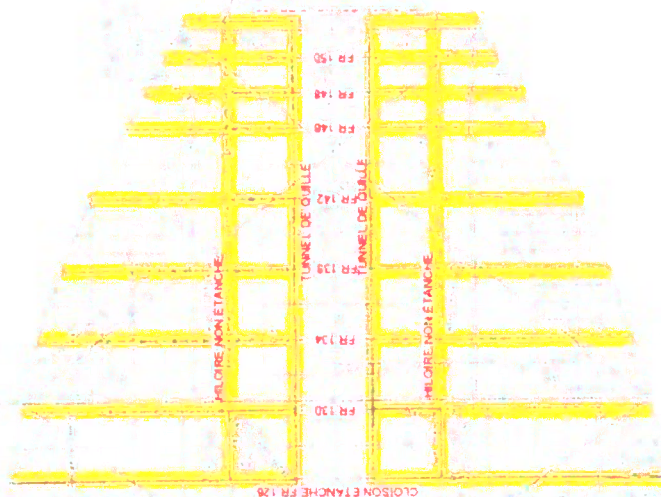
Watertight Transverse Floor Fr. 54				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 54(P)	10.50	10.69	-
02	Fr. 54(P)	10.50	10.81	-
03	Fr. 54(P)	10.50	11.20	-
04	Fr. 54(P)	10.50	11.15	-
05	Fr. 54(P)	10.50	11.13	-

Watertight Transverse Floor Fr. 70				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 70(P)	10.50	10.77	-
02	Fr. 70(P)	10.50	10.77	-
03	Fr. 70(P)	10.50	11.35	-
04	Fr. 70(P)	10.50	11.51	-
05	Fr. 70(P)	10.50	11.56	-

Watertight Transverse Floor Fr. 54				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 54(S)	10.50	10.42	0.76
02	Fr. 54(S)	10.50	10.99	-
03	Fr. 54(S)	10.50	10.97	-
04	Fr. 54(S)	10.50	10.89	-
05	Fr. 54(S)	10.50	10.84	-

Watertight Transverse Floor Fr. 70				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 70(S)	10.50	10.79	-
02	Fr. 70(S)	10.50	10.75	-
03	Fr. 70(S)	10.50	10.67	-
04	Fr. 70(S)	10.50	10.67	-
05	Fr. 70(S)	10.50	10.68	-

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ELEMENT DE STRUCTURE A VERIFIER

PLAN DOUBLE-FOND RÉSERVOIR #2



HILOIRE NON ÉTANCHE TYPIQUE



TUNNEL DE QUILLE

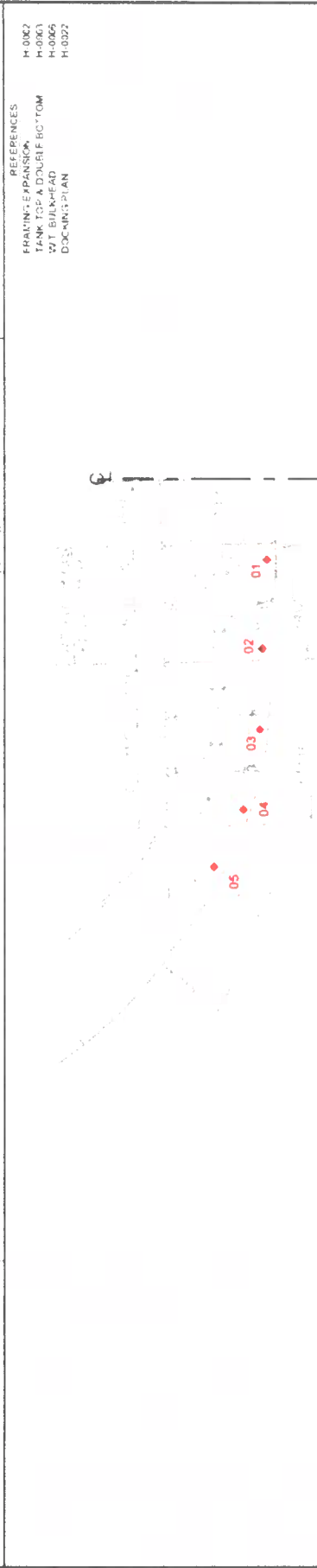
Longitudinal Girder 2400 off CL					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 126 to 152(P)	10.50	9.97	5.05	13.3
02	Fr. 126 to 152(P)	9.00	9.41	-	13.3
03	Fr. 126 to 152(P)	9.00	9.41	-	13.3
04	Fr. 126 to 152(P)	9.00	9.47	-	13.3
05	Fr. 126 to 152(P)	9.00	9.52	-	13.3
06	Fr. 126 to 152(P)	9.00	9.48	-	13.3
07	Fr. 126 to 152(P)	9.00	9.53	-	13.3

Longitudinal Girder Watertight Cable Tunnel						
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	
01	Fr. 126 to 152(P)	12.00	12.19	-	13.3	
02	Fr. 126 to 152(P)	12.00	12.69	-	13.3	
03	Fr. 126 to 152(P)	12.00	12.15	-	13.3	
04	Fr. 126 to 152(P)	12.00	12.11	-	13.3	
05	Fr. 126 to 152(P)	12.00	12.21	-	13.3	
06	Fr. 126 to 152(P)	12.00	12.25	-	13.3	
07	Fr. 126 to 152(P)	12.00	12.30	-	13.3	

Longitudinal Girder 2400 off CL					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 126 to 152(S)	10.50	9.81	6.57	13.3
02	Fr. 126 to 152(S)	9.00	9.32	-	13.3
03	Fr. 126 to 152(S)	9.00	9.32	-	13.3
04	Fr. 126 to 152(S)	9.00	9.33	-	13.3
05	Fr. 126 to 152(S)	9.00	9.31	-	13.3
06	Fr. 126 to 152(S)	9.00	9.29	-	13.3
07	Fr. 126 to 152(S)	9.00	9.34	-	13.3

Longitudinal Girder Watertight Cable Tunnel						
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	
01	Fr. 126 to 152(S)	12.00	12.21	-	13.3	
02	Fr. 126 to 152(S)	12.00	12.21	-	13.3	
03	Fr. 126 to 152(S)	12.00	12.20	-	13.3	
04	Fr. 126 to 152(S)	12.00	12.21	-	13.3	
05	Fr. 126 to 152(S)	12.00	12.15	-	13.3	
06	Fr. 126 to 152(S)	12.00	12.15	-	13.3	
07	Fr. 126 to 152(S)	12.00	12.11	-	13.3	

 Fisheries and Oceans Canada Garde-pêche Coast Guard	MARTHA L. BLACK ESSAIS DÉPAISE (UP ULTRASOUND) RESERVOIR DOUBLE FOND #FR 126 152		Date: 11/11/2014 Page: 1 Date: 11/11/2014 Page: 1	Date: 11/11/2014 Page: 1 Date: 11/11/2014 Page: 1	Date: 11/11/2014 Page: 1 Date: 11/11/2014 Page: 1
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VARANGUE FR. 134

Transverse Floor Fr. 130					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 130(P)	10.00	10.15	-	13.3
02	Fr. 130(P)	10.00	10.10	-	13.3
03	Fr. 130(P)	10.00	10.21	-	13.3
04	Fr. 130(P)	10.00	10.07	-	13.3
05	Fr. 130(P)	10.00	10.12	-	13.3

Transverse Floor Fr. 134					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 134(P)	10.00	10.20	-	13.3
02	Fr. 134(P)	10.00	10.22	-	13.3
03	Fr. 134(P)	10.00	10.02	-	13.3
04	Fr. 134(P)	10.00	10.24	-	13.3
05	Fr. 134(P)	10.00	10.19	-	13.3

Transverse Floor Fr. 138					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 138(P)	10.00	10.62	-	13.3
02	Fr. 138(P)	10.00	10.07	-	13.3
03	Fr. 138(P)	10.00	10.05	-	13.3
04	Fr. 138(P)	10.00	10.06	-	13.3
05	Fr. 138(P)	10.00	10.07	-	13.3

Transverse Floor Fr. 142					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 142(P)	10.00	10.29	-	13.3
02	Fr. 142(P)	10.00	10.16	-	13.3
03	Fr. 142(P)	10.00	10.12	-	13.3
04	Fr. 142(P)	10.00	10.30	-	13.3

Transverse Floor Fr. 130					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 130(S)	10.00	10.06	-	13.3
02	Fr. 130(S)	10.00	10.11	-	13.3
03	Fr. 130(S)	10.00	10.17	-	13.3
04	Fr. 130(S)	10.00	10.14	-	13.3
05	Fr. 130(S)	10.00	10.03	-	13.3

Transverse Floor Fr. 134					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 134(S)	10.00	10.10	-	13.3
02	Fr. 134(S)	10.00	10.10	-	13.3
03	Fr. 134(S)	10.00	10.03	-	13.3
04	Fr. 134(S)	10.00	10.05	-	13.3
05	Fr. 134(S)	10.00	10.01	-	13.3

Transverse Floor Fr. 138					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 138(S)	10.00	10.09	-	13.3
02	Fr. 138(S)	10.00	10.10	-	13.3
03	Fr. 138(S)	10.00	10.15	-	13.3
04	Fr. 138(S)	10.00	10.07	-	13.3
05	Fr. 138(S)	10.00	10.22	-	13.3

Transverse Floor Fr. 142					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 142(S)	10.00	10.33	-	13.3
02	Fr. 142(S)	10.00	10.37	-	13.3
03	Fr. 142(S)	10.00	10.28	-	13.3
04	Fr. 142(S)	10.00	10.34	-	13.3

REFERENCES:
 FRANKING EXPANSION,
 TANK TOP & DOUBLE BOTTOM
 W/T BULKHEAD
 DOCKING PLAN

 Fisheries and Oceans Canada Garde-pêche	MARTHAL BLACK ESSAIS D'ÉPAISSEUR ULTRASONIQUES RÉSERVOIR DOUBLE FOND #2 FR 150-152			
	Date: 17/01/2008 Lieu: 150-152 Opérateur: J. Gauthier Date: 17/01/2008	Date: 17/01/2008 Lieu: 150-152 Opérateur: J. Gauthier Date: 17/01/2008	Date: 17/01/2008 Lieu: 150-152 Opérateur: J. Gauthier Date: 17/01/2008	Date: 17/01/2008 Lieu: 150-152 Opérateur: J. Gauthier Date: 17/01/2008

H-0002 H-0003 H-0006 H-0027	H-0002 H-0003 H-0006 H-0027
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VARANGUE FR. 150

Transverse Floor Fr. 146				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 146(P)	10.00	10.34	- 13.3
02	Fr. 146(P)	10.00	10.25	- 13.3
03	Fr. 146(P)	10.00	10.29	- 13.3

Transverse Floor Fr. 148				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 148(P)	10.00	10.03	- 13.3
02	Fr. 148(P)	10.00	9.99	0.10 13.3
03	Fr. 148(P)	10.00	9.96	0.40 13.3

Transverse Floor Fr. 150				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 150(P)	10.00	10.19	- 13.3
02	Fr. 150(P)	10.00	10.22	- 13.3
03	Fr. 150(P)	10.00	10.19	- 13.3

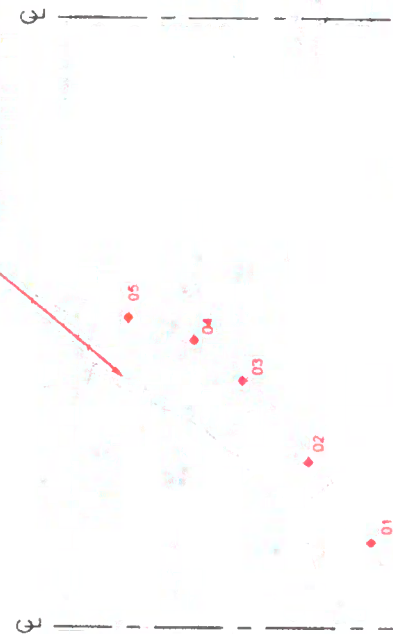
Transverse Floor Fr. 146				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 146(S)	10.00	10.28	- 13.3
02	Fr. 146(S)	10.00	10.32	- 13.3
03	Fr. 146(S)	10.00	10.25	- 13.3

Transverse Floor Fr. 148				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 148(S)	10.00	10.06	- 13.3
02	Fr. 148(S)	10.00	10.06	- 13.3
03	Fr. 148(S)	10.00	10.27	- 13.3

Transverse Floor Fr. 150				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 150(S)	10.00	10.06	- 13.3
02	Fr. 150(S)	10.00	10.10	- 13.3
03	Fr. 150(S)	10.00	10.21	- 13.3

REFERENCES
 FRAMING EXPANSION
 TANK TOP & DOUBLE BOTTOM
 WTT BULPHHEAD
 DOCKING PLAN

— CLOISON LATÉRALE (VOIR P. 44);



REFERENCES
CONSTRUCTION SECTION
PROFILE AND DESIGN
W.T. BULLHEAD
H-2 P 11
H-3 P 13
H-0006

FR. 156

Frame 154					
NUM	LOCATION	ORG. THK.	Gauged THK.	DIFF %	MAX 2SS DIM %
01	Fr. 154(P)	25.00	25.73	-	13.3
02	Fr. 154(P)	25.00	25.02	-	13.3
03	Fr. 154(P)	25.00	24.61	1.56	13.3
04	Fr. 154(P)	25.00	24.82	0.72	13.3
05	Fr. 154(P)	25.00	24.79	0.84	13.3

Frame 156					
NUM	LOCATION	ORG. THK.	Gauged THK.	DIFF %	MAX 2SS DIM %
01	Fr. 156(P)	25.00	25.68	-	13.3
02	Fr. 156(P)	25.00	24.52	1.92	13.3
03	Fr. 156(P)	25.00	25.73	-	13.3
04	Fr. 156(P)	25.00	25.02	-	13.3
05	Fr. 156(P)	25.00	25.17	-	13.3

Frame 158						
NUM	LOCATION	ORG.		Gauged		MAX 2SS DIM %
		THK. mm.	THK. mm.	THK. mm.	DIFF %	
01	Fr. 158(P)	25.00	25.71	-	13.3	
02	Fr. 158(P)	25.00	24.54	1.84	13.3	
03	Fr. 158(P)	25.00	25.74	-	13.3	
04	Fr. 158(P)	25.00	25.62	-	13.3	
05	Fr. 158(P)	25.00	25.20	-	13.3	

Frame 160						
	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
	01	Fr. 160(P)	25.00	24.58	1.68	13.3
	02	Fr. 160(P)	25.00	24.64	1.44	13.3
	03	Fr. 160(P)	25.00	25.73	-	13.3
	04	Fr. 160(P)	25.00	25.92	-	13.3
	05	Fr. 160(P)	25.00	25.08	-	13.3

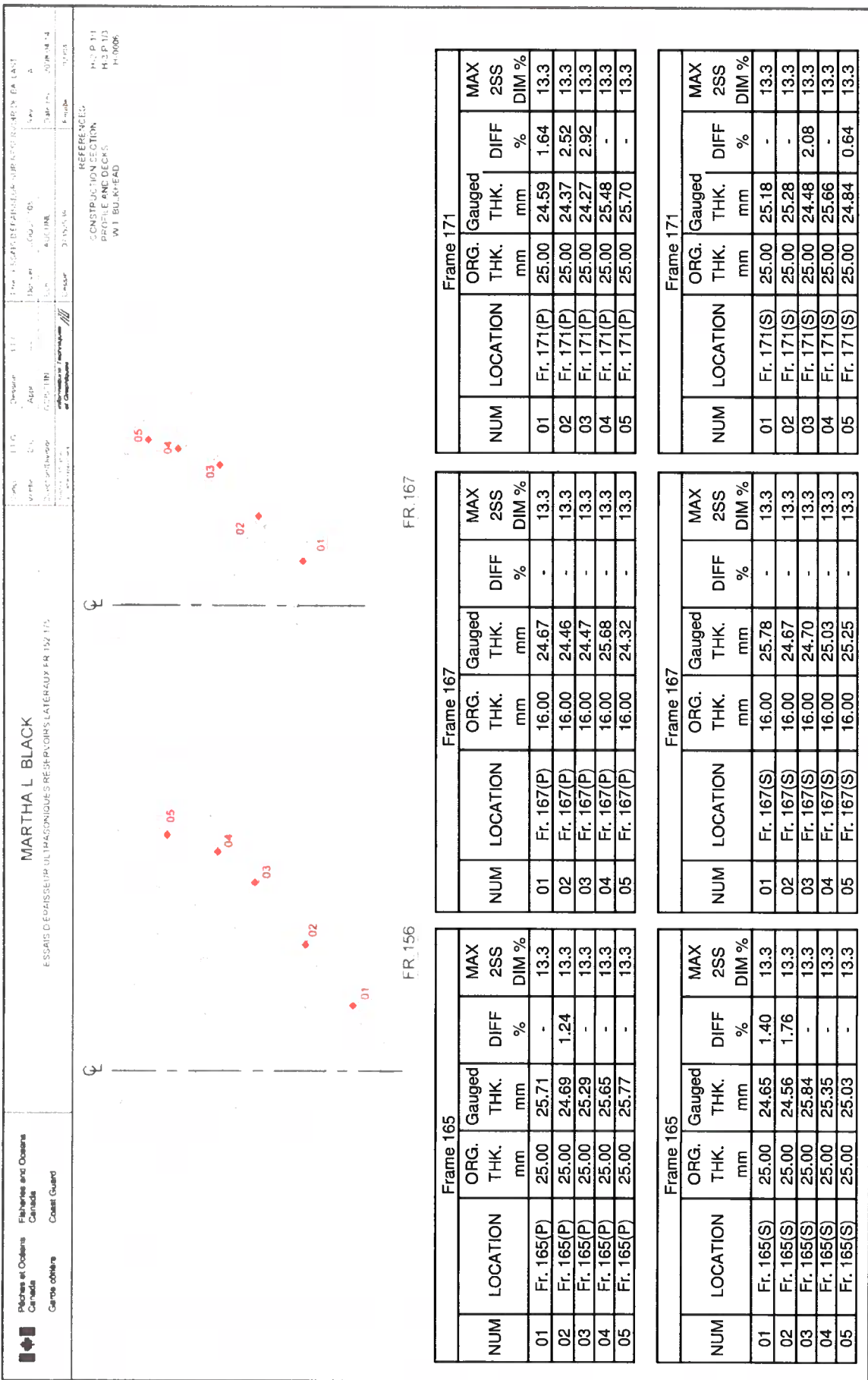
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NUM	LOCATION	ORIG. THK. mm	Gauged THK. mm	DIFF %	MAX DM %	2SS
01	Fr. 154(S)	25.00	25.96	-	13.3	
02	Fr. 154(S)	25.00	25.01	-	13.3	
03	Fr. 154(S)	25.00	25.75	-	13.3	
04	Fr. 154(S)	25.00	25.47	-	13.3	
05	Fr. 154(S)	25.00	25.31	-	13.3	

NUM	LOCATION	ORG.	THK.	Gauged	DIFF	MAX
		mm	mm	mm	%	DIM %
01	Fr. 156(S)	25.00	24.96	0.16	13.3	13.3
02	Fr. 156(S)	25.00	24.69	1.24	13.3	13.3
03	Fr. 156(S)	25.00	25.87	-	13.3	13.3
04	Fr. 156(S)	25.00	24.37	2.52	13.3	13.3
05	Fr. 156(S)	25.00	25.38	-	13.3	13.3

NUM	LOCATION	ORIG. THK. mm	Gauged THK. mm	DIFF %	2SS DM %
01	Fr. 158(S)	25.00	25.73	-	13.3
02	Fr. 158(S)	25.00	25.58	-	13.3
03	Fr. 158(S)	25.00	24.97	0.12	13.3
04	Fr. 158(S)	25.00	24.73	1.08	13.3
05	Fr. 158(S)	25.00	25.41	-	13.3

NUM	LOCATION	ORG.	THK.	mm.	Gauged	DIFF	2SS	MAX
01	Fr. 160(S)	25.00	25.13	-	-	-	13.3	
02	Fr. 160(S)	25.00	25.78	-	-	-	13.3	
03	Fr. 160(S)	25.00	24.68	1.28	-	-	13.3	
04	Fr. 160(S)	25.00	25.67	-	-	-	13.3	
05	Fr. 160(S)	25.00	25.35	-	-	-	13.3	



Pêches et Océans Canada
Fisheries and Oceans Canada
Coast Guard

MARTHA L BLACK

ESSAIS D'ÉPAISSEUR ULTRASONIQUES RÉGULIERS LATÉRAUX FR 152 175

PROFIL
Fr. 165
Fr. 167
Fr. 171

PROFIL
Fr. 165
Fr. 167
Fr. 171

PROFIL
Fr. 165
Fr. 167
Fr. 171

REFERENCE
CONSTRUCTION SECTION
WT BULHEAD
H-1000

NUM	LOCATION	ORG. THK. mm	GAUGED THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 165(P)	25.00	25.71	-	13.3
02	Fr. 165(P)	25.00	24.69	1.24	13.3
03	Fr. 165(P)	25.00	25.29	-	13.3
04	Fr. 165(P)	25.00	25.65	-	13.3
05	Fr. 165(P)	25.00	25.77	-	13.3

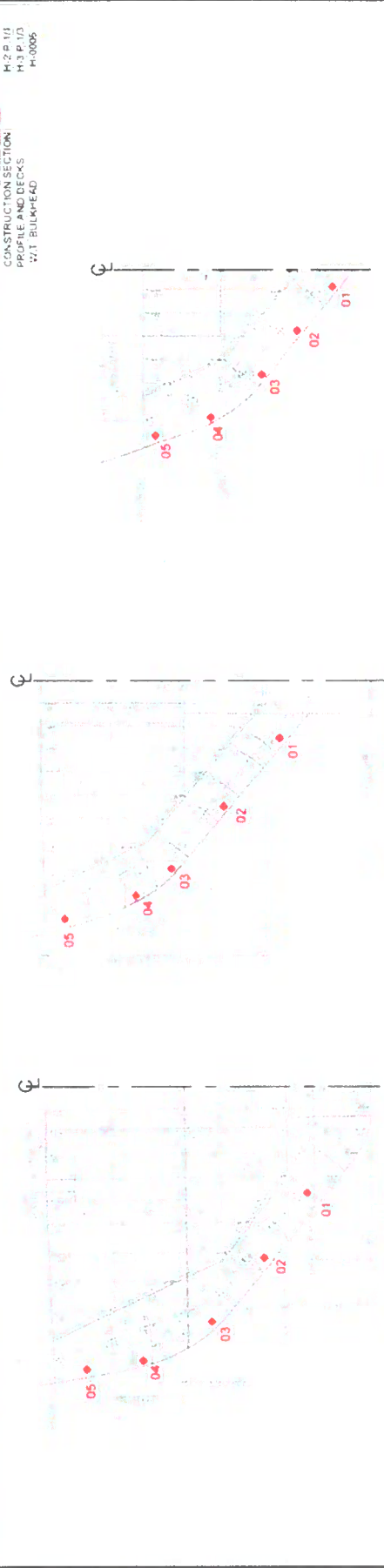
NUM	LOCATION	ORG. THK. mm	GAUGED THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 167(P)	16.00	24.67	-	13.3
02	Fr. 167(P)	16.00	24.46	-	13.3
03	Fr. 167(P)	16.00	24.47	-	13.3
04	Fr. 167(P)	16.00	25.68	-	13.3
05	Fr. 167(P)	16.00	24.32	-	13.3

NUM	LOCATION	ORG. THK. mm	GAUGED THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 171(P)	25.00	24.59	1.64	13.3
02	Fr. 171(P)	25.00	24.37	2.52	13.3
03	Fr. 171(P)	25.00	24.27	2.92	13.3
04	Fr. 171(P)	25.00	25.48	-	13.3
05	Fr. 171(P)	25.00	25.70	-	13.3

NUM	LOCATION	ORG. THK. mm	GAUGED THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 165(S)	25.00	24.65	1.40	13.3
02	Fr. 165(S)	25.00	24.56	1.76	13.3
03	Fr. 165(S)	25.00	25.84	-	13.3
04	Fr. 165(S)	25.00	25.35	-	13.3
05	Fr. 165(S)	25.00	25.03	-	13.3

NUM	LOCATION	ORG. THK. mm	GAUGED THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 167(S)	16.00	25.78	-	13.3
02	Fr. 167(S)	16.00	24.67	-	13.3
03	Fr. 167(S)	16.00	24.70	-	13.3
04	Fr. 167(S)	16.00	25.03	-	13.3
05	Fr. 167(S)	16.00	25.25	-	13.3

NUM	LOCATION	ORG. THK. mm	GAUGED THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 171(S)	25.00	25.18	-	13.3
02	Fr. 171(S)	25.00	25.28	-	13.3
03	Fr. 171(S)	25.00	24.48	2.08	13.3
04	Fr. 171(S)	25.00	25.66	-	13.3
05	Fr. 171(S)	25.00	24.84	0.64	13.3



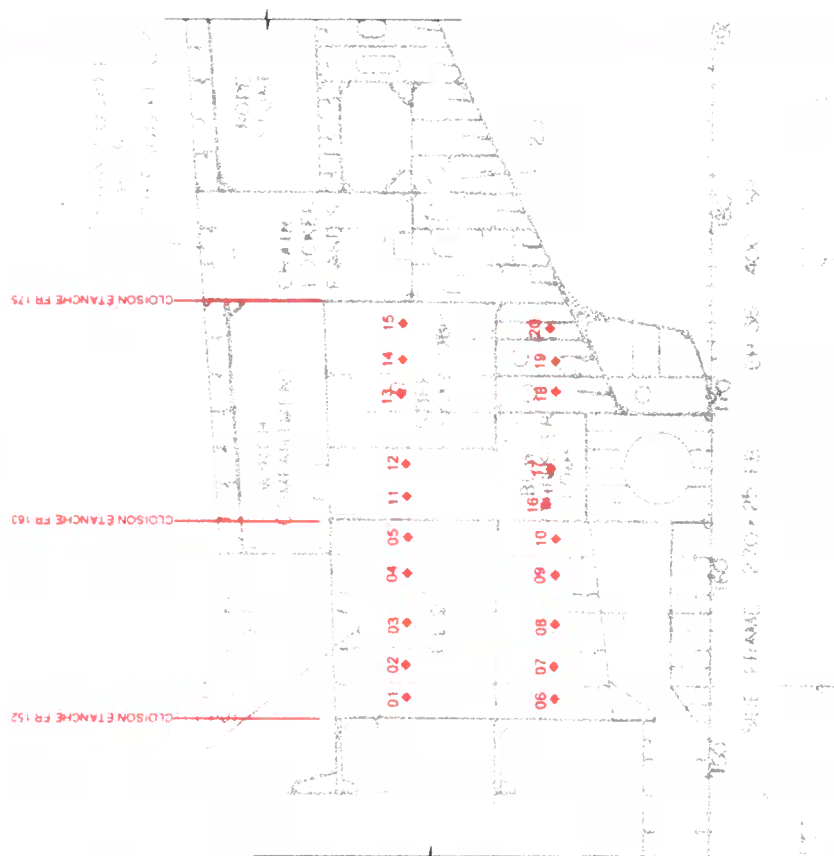
CLOISON ÉTANCHE FR 152

CLOISON ÉTANCHE FR 163

CLOISON ÉTANCHE FR 175

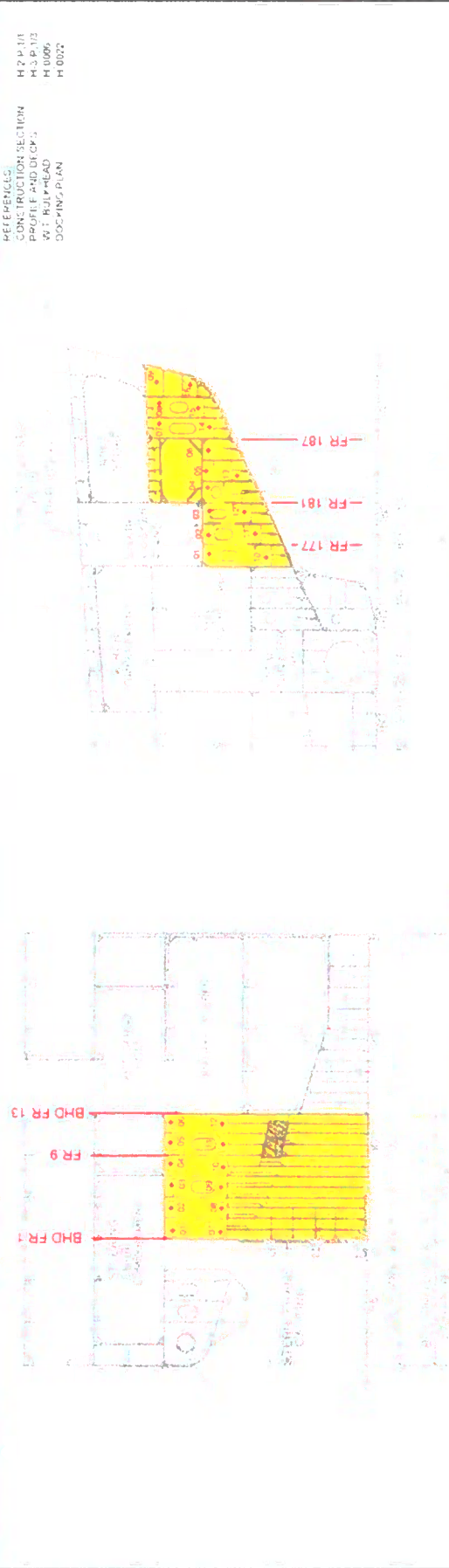
Bulkhead Fr. 152					Bulkhead Fr. 163					Bulkhead Fr. 175				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm
01	Fr. 152(P)	16.00	16.08	-	13.3	01	Fr. 163(P)	16.00	16.33	-	13.3	01	Fr. 175(P)	16.00
02	Fr. 152(P)	16.00	16.68	-	13.3	02	Fr. 163(P)	16.00	15.79	1.31	13.3	02	Fr. 175(P)	16.00
03	Fr. 152(P)	16.00	16.11	-	13.3	03	Fr. 163(P)	16.00	16.14	-	13.3	03	Fr. 175(P)	16.00
04	Fr. 152(P)	16.00	16.09	-	13.3	04	Fr. 163(P)	16.00	16.11	-	13.3	04	Fr. 175(P)	16.00
05	Fr. 152(P)	16.00	15.97	0.19	13.3	05	Fr. 163(P)	16.00	16.40	-	13.3	05	Fr. 175(P)	16.00

Bulkhead Fr. 152					Bulkhead Fr. 163					Bulkhead Fr. 175				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm
01	Fr. 152(S)	16.00	16.55	-	13.3	01	Fr. 163(S)	16.00	16.21	-	13.3	01	Fr. 175(S)	16.00
02	Fr. 152(S)	16.00	15.53	2.94	13.3	02	Fr. 163(S)	16.00	15.87	0.81	13.3	02	Fr. 175(S)	16.00
03	Fr. 152(S)	16.00	16.35	-	13.3	03	Fr. 163(S)	16.00	16.32	-	13.3	03	Fr. 175(S)	16.00
04	Fr. 152(S)	16.00	15.86	0.88	13.3	04	Fr. 163(S)	16.00	15.72	1.75	13.3	04	Fr. 175(S)	16.00
05	Fr. 152(S)	16.00	16.02	-	13.3	05	Fr. 163(S)	16.00	16.17	-	13.3	05	Fr. 175(S)	16.00



VUE AU CENTRE POUR RÉFÉRENCE
CLOISONS LATÉRALES À VÉRIFIER

Centerline Bulkhead Fr. 152 to 163					
NUM	LOCATION	ORG.		Gauged	MAX 2SS DIM %
		THK. mm	THK. mm	DIFF %	
01	Fr. 152-163	7.50	9.27	-	13.3
02	Fr. 152-163	7.50	9.35	-	13.3
03	Fr. 152-163	7.50	9.23	-	13.3
04	Fr. 152-163	7.50	9.27	-	13.3
05	Fr. 152-163	7.50	9.32	-	13.3
06	Fr. 152-163	10.00	9.42	5.80	13.3
07	Fr. 152-163	10.00	9.44	5.60	13.3
08	Fr. 152-163	10.00	9.38	6.20	13.3
09	Fr. 152-163	10.00	9.18	8.20	13.3
10	Fr. 152-163	10.00	9.29	7.10	13.3
11	Fr. 152-163	9.00	9.56	-	13.3
12	Fr. 152-163	9.00	9.97	-	13.3
13	Fr. 152-163	9.00	n/a	-	13.3
14	Fr. 152-163	9.00	n/a	-	13.3
15	Fr. 152-163	9.00	n/a	-	13.3
16	Fr. 152-163	9.00	9.42	-	13.3
17	Fr. 152-163	9.00	9.46	-	13.3
18	Fr. 152-163	9.00	n/a	-	13.3
19	Fr. 152-163	9.00	n/a	-	13.3
20	Fr. 152-163	9.00	n/a	-	13.3



COQUE AVANT

COQUE ARRIÈRE

ÉLÉMENT DE STRUCTURE À VÉRIFIER

Centerline Bulkhead Fr. 1 to 13						Centerline Bulkhead Fr. 175 to 193					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 1-13	10.00	10.86	-	13.3	01	Fr. 175-193	20.00	20.41	-	13.3
02	Fr. 1-13	10.00	10.19	-	13.3	02	Fr. 175-193	20.00	20.42	-	13.3
03	Fr. 1-13	10.00	10.22	-	13.3	03	Fr. 175-193	20.00	20.38	-	13.3
04	Fr. 1-13	10.00	10.80	-	13.3	04	Fr. 175-193	20.00	20.54	-	13.3
05	Fr. 1-13	10.00	10.31	-	13.3	05	Fr. 175-193	20.00	20.53	-	13.3
06	Fr. 1-13	10.00	10.69	-	13.3	06	Fr. 175-193	20.00	20.38	-	13.3
07	Fr. 1-13	10.00	10.90	-	13.3	07	Fr. 175-193	20.00	20.20	-	13.3
08	Fr. 1-13	10.00	10.32	-	13.3	08	Fr. 175-193	20.00	20.10	-	13.3
09	Fr. 1-13	10.00	10.72	-	13.3	09	Fr. 175-193	20.00	20.46	-	13.3
10	Fr. 1-13	10.00	10.73	-	13.3	10	Fr. 175-193	20.00	20.39	-	13.3
11	Fr. 1-13	10.00	10.28	-	13.3	11	Fr. 175-193	20.00	20.39	-	13.3
12	Fr. 1-13	10.00	10.12	-	13.3	12	Fr. 175-193	20.00	20.53	-	13.3
						13	Fr. 175-193	20.00	20.64	-	13.3
						14	Fr. 175-193	20.00	19.32	3.40	13.3
						15	Fr. 175-193	20.00	20.20	-	13.3
						16	Fr. 175-193	20.00	20.17	-	13.3

Centerline Bulkhead Fr. 1 to 13						Centerline Bulkhead Fr. 175 to 193					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 1-13	10.00	10.86	-	13.3	01	Fr. 175-193	20.00	20.41	-	13.3
02	Fr. 1-13	10.00	10.19	-	13.3	02	Fr. 175-193	20.00	20.42	-	13.3
03	Fr. 1-13	10.00	10.22	-	13.3	03	Fr. 175-193	20.00	20.38	-	13.3
04	Fr. 1-13	10.00	10.80	-	13.3	04	Fr. 175-193	20.00	20.54	-	13.3
05	Fr. 1-13	10.00	10.31	-	13.3	05	Fr. 175-193	20.00	20.53	-	13.3
06	Fr. 1-13	10.00	10.69	-	13.3	06	Fr. 175-193	20.00	20.38	-	13.3
07	Fr. 1-13	10.00	10.90	-	13.3	07	Fr. 175-193	20.00	20.20	-	13.3
08	Fr. 1-13	10.00	10.32	-	13.3	08	Fr. 175-193	20.00	20.10	-	13.3
09	Fr. 1-13	10.00	10.72	-	13.3	09	Fr. 175-193	20.00	20.46	-	13.3
10	Fr. 1-13	10.00	10.73	-	13.3	10	Fr. 175-193	20.00	20.39	-	13.3
11	Fr. 1-13	10.00	10.28	-	13.3	11	Fr. 175-193	20.00	20.39	-	13.3
12	Fr. 1-13	10.00	10.12	-	13.3	12	Fr. 175-193	20.00	20.53	-	13.3
						13	Fr. 175-193	20.00	20.64	-	13.3
						14	Fr. 175-193	20.00	19.32	3.40	13.3
						15	Fr. 175-193	20.00	20.20	-	13.3
						16	Fr. 175-193	20.00	20.17	-	13.3

ER.1

FR.9

FR.13

Bulkhead Fr. 1					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 1(P)	9.00	9.30	-	13.3
02	Fr. 1(P)	9.00	9.39	-	13.3
03	Fr. 1(P)	15.00	15.88	-	13.3
04	Fr. 1(P)	15.00	15.45	-	13.3
05	Fr. 1(P)	15.00	15.96	-	13.3

Frame 9					
NUM	LOCATION	ORG. THK.	Gauged THK.	DIFF %	MAX 2SS DIM %
01	Fr. 9(P)	20.00	n/a		13.3
02	Fr. 9(P)	20.00	20.10	-	13.3
03	Fr. 9(P)	15.00	15.36	-	13.3
04	Fr. 9(P)	15.00	15.29	-	13.3
05	Fr. 9(P)	15.00	15.20	-	13.3

Bulkhead Fr. 13					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 13(P)	10.50	n/a		13.3
02	Fr. 13(P)	14.00	13.87	0.93	13.3
03	Fr. 13(P)	14.00	14.06	-	13.3
04	Fr. 13(P)	14.00	14.10	-	13.3
05	Fr. 12(B)	14.00	14.14		13.3

NUM	LOCATION	Bulkhead Fr. 1				DIFF	MAX 2SS DIM %
		THK. mm	ORG. THK. mm	Gauged THK. mm	%		
01	Fr. 1(S)	9.00	9.00	9.45	-	13.3	
02	Fr. 1(S)	9.00	9.00	9.32	-	13.3	
03	Fr. 1(S)	15.00	15.00	16.20	-	13.3	
04	Fr. 1(S)	15.00	15.00	15.80	-	13.3	
05	Fr. 1(S)	15.00	15.00	16.20	-	13.3	

Frame 9					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 9(S)	20.00	n/a		13.3
02	Fr. 9(S)	20.00	19.50	2.50	13.3
03	Fr. 9(S)	15.00	15.63	-	13.3
04	Fr. 9(S)	15.00	15.11	-	13.3
05	Fr. 9(S)	15.00	15.15	-	13.3

Bulkhead Fr. 13					
NUM	LOCATION	ORG. THK.	Gauged THK.	DIFF %	MAX 2SS DIM
0					
01	Fr. 13(S)	10.50	n/a		13.3
02	Fr. 13(S)	14.00	13.84	1.14	13.3
03	Fr. 13(S)	14.00	14.08	-	13.3
04	Fr. 13(S)	14.00	14.02	-	13.3
05	Fr. 13(S)	14.00	13.91	1.96	13.3

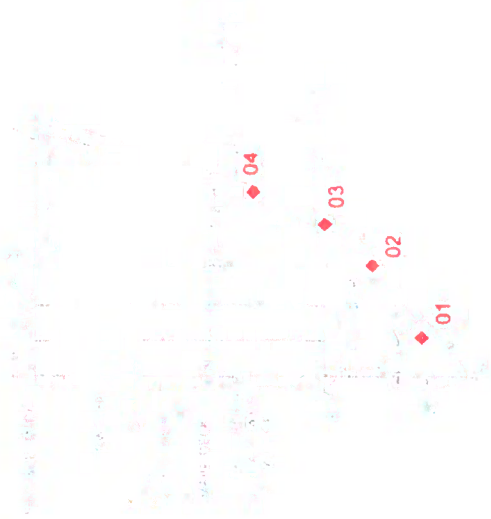
REFERENCES	H-2-P-101
CONSTRUCTION SECTION	H-3-P-102
PROFILE AND DEEPS	H-0006
WT BULKHEAD	H-0027
DOCKING PLAN	



R ch s de l'oc an
Canada
Coastal Guard

MARTHAL BLACK

ESTABLISHED BY THE DEPARTMENT OF FISHERIES AND OCEANS



FR. 181

REFERENCES:
CONSTRUCTION SECTION
PROFILE AND DECK
W1 BULKHEAD
DOCKING PLAN

H 2 P 11
H 3 P 12
H 009
H 0027

Frame 177				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 177(P)	20.00	20.58	- 13.3
02	Fr. 177(P)	25.00	25.78	- 13.3
03	Fr. 177(P)	25.00	25.61	- 13.3
04	Fr. 177(P)	25.00	25.76	- 13.3

Frame 181				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 181(P)	20.00	20.61	- 13.3
02	Fr. 181(P)	25.00	25.36	- 13.3
03	Fr. 181(P)	25.00	25.55	- 13.3
04	Fr. 181(P)	25.00	25.29	- 13.3

Frame 187				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
0				
01	Fr. 187(P)	20.00	20.34	- 13.3
02	Fr. 187(P)	25.00	25.53	- 13.3
03	Fr. 187(P)	25.00	25.69	- 13.3
04	Fr. 187(P)	25.00	24.76	0.96 13.3

Frame 177				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 177(S)	20.00	20.46	- 13.3
02	Fr. 177(S)	25.00	25.75	- 13.3
03	Fr. 177(S)	25.00	24.36	2.56 13.3
04	Fr. 177(S)	25.00	25.60	- 13.3

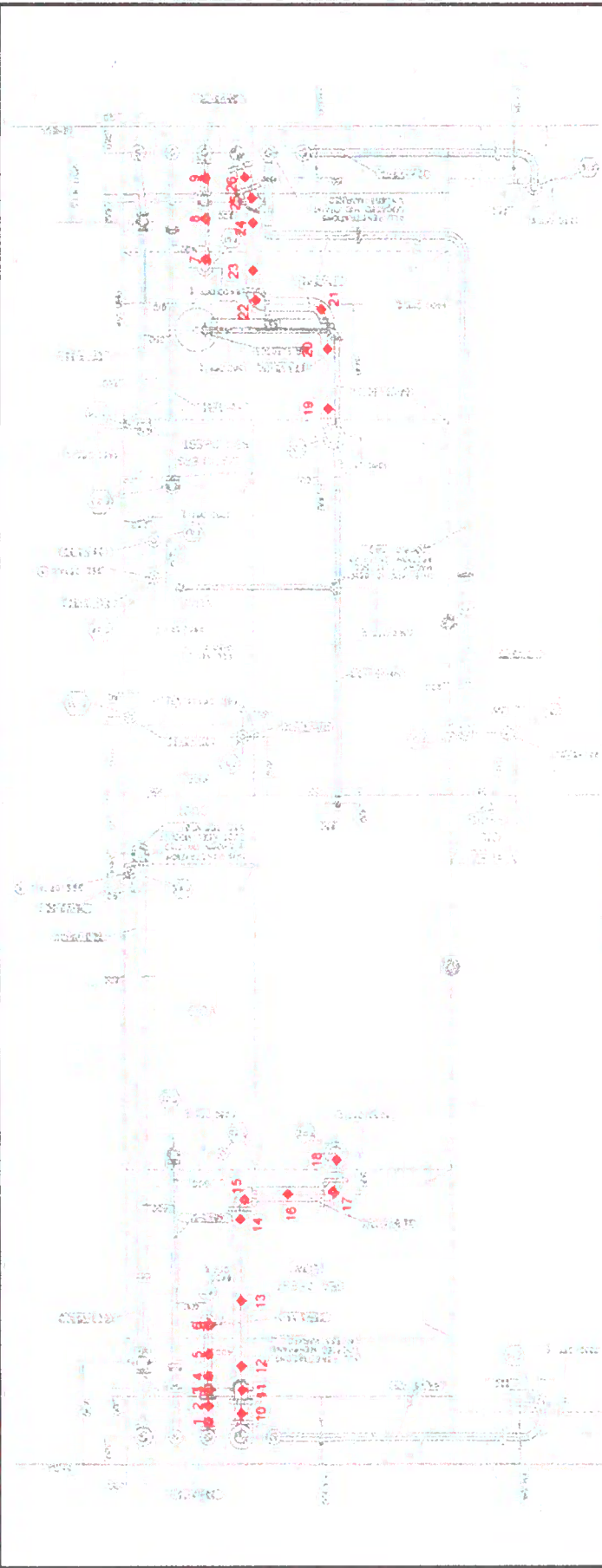
Frame 181				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 181(S)	20.00	20.53	- 13.3
02	Fr. 181(S)	25.00	25.28	- 13.3
03	Fr. 181(S)	25.00	25.11	- 13.3
04	Fr. 181(S)	25.00	24.51	1.96 13.3

Frame 187				
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %
01	Fr. 187(S)	20.00	20.28	- 13.3
02	Fr. 187(S)	25.00	24.40	2.40 13.3
03	Fr. 187(S)	25.00	24.42	2.92 13.3
04	Fr. 187(S)	25.00	25.39	- 13.3

Thickness Measurement

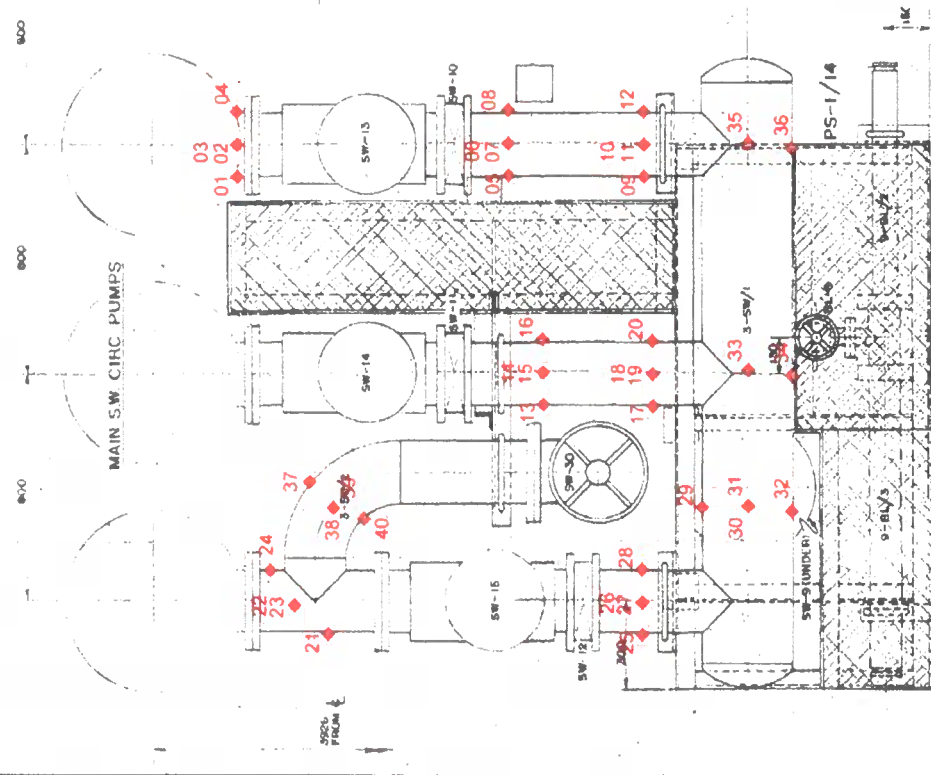
Engine Room Piping

 Pêches et Océans Canada Garde côtière	Fisheries and Oceans Canada Coast Guard	MARTHA L BLACK		Date: 01/01/2010	Drawn: 01/01/2010	Scale: 1:100	Date: 01/01/2010	Drawn: 01/01/2010	Scale: 1:100
		ENCAISSEMENT DES TROUS DE CÂBLES ET DE TUBES TOTALAIRE - AIR AND SOUNDING		Date: 01/01/2010	Drawn: 01/01/2010	Scale: 1:100	Date: 01/01/2010	Drawn: 01/01/2010	Scale: 1:100

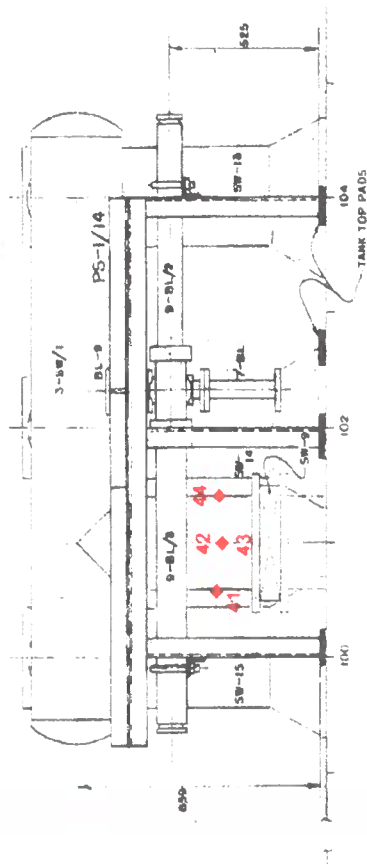


VUE EN PLAN - DESSUS DU DOUBLE-FOND
REF: 67-30-02 - ARRGT OF AIR & SOUNDING PIPES

Vent Low Sea Chest				Vent Sea Bay			
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %	DIFF %	MAX 2SS DIM %	DIFF %
01	Fr. 103.5(P)	5.23	5.44	16.7	-	16.7	-
02	Fr. 103.5(P)	5.23	5.38	16.7	-	16.7	-
03	Fr. 103.5(P)	5.23	5.84	16.7	-	16.7	-
04	Fr. 103.5(P)	5.23	5.90	16.7	-	16.7	-
05	Fr. 103.5(P)	5.23	5.03	16.7	3.82	16.7	-
06	Fr. 103.5(P)	5.23	5.83	16.7	-	16.7	-
07	Fr. 103.5(S)	5.23	7.30	16.7	-	16.7	-
08	Fr. 103.5(S)	5.23	7.27	16.7	-	16.7	-
09	Fr. 103.5(S)	5.23	7.65	16.7	-	16.7	-
Vent Sea Bay				Vent Sea Bay			
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %	DIFF %	MAX 2SS DIM %	DIFF %
10	Fr. 102.5(P)	7.11	6.58	16.7	7.45	16.7	-
11	Fr. 102.5(P)	7.11	6.22	16.7	12.52	16.7	-
12	Fr. 102.5(P)	7.11	6.68	16.7	6.05	16.7	-
13	Fr. 102.5(P)	7.11	6.76	16.7	4.92	16.7	-
14	Fr. 102.5(P)	7.11	6.63	16.7	6.75	16.7	-
15	Fr. 102.5(P)	7.11	8.55	16.7	-	16.7	-
16	Fr. 100.5(P)	7.11	6.35	16.7	10.69	16.7	-
17	Fr. 99.5(P)	7.11	8.73	16.7	-	16.7	-
18	Fr. 99.5(P)	7.11	6.89	16.7	3.09	16.7	-
Vent Sea Bay				Vent Sea Bay			
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	MAX 2SS DIM %	DIFF %	MAX 2SS DIM %	DIFF %
19	Fr. 99.5(S)	7.11	7.00	16.7	1.55	16.7	-
20	Fr. 99.5(S)	7.11	6.88	16.7	3.23	16.7	-
21	Fr. 99.5(S)	7.11	6.89	16.7	3.09	16.7	-
22	Fr. 102(S)	7.11	9.10	16.7	-	16.7	-
23	Fr. 102(S)	7.11	6.60	16.7	7.17	16.7	-
24	Fr. 102(S)	7.11	6.29	16.7	11.53	16.7	-
25	Fr. 102(S)	7.11	9.99	16.7	-	16.7	-
26	Fr. 102(S)	7.11	7.18	16.7	-	16.7	-



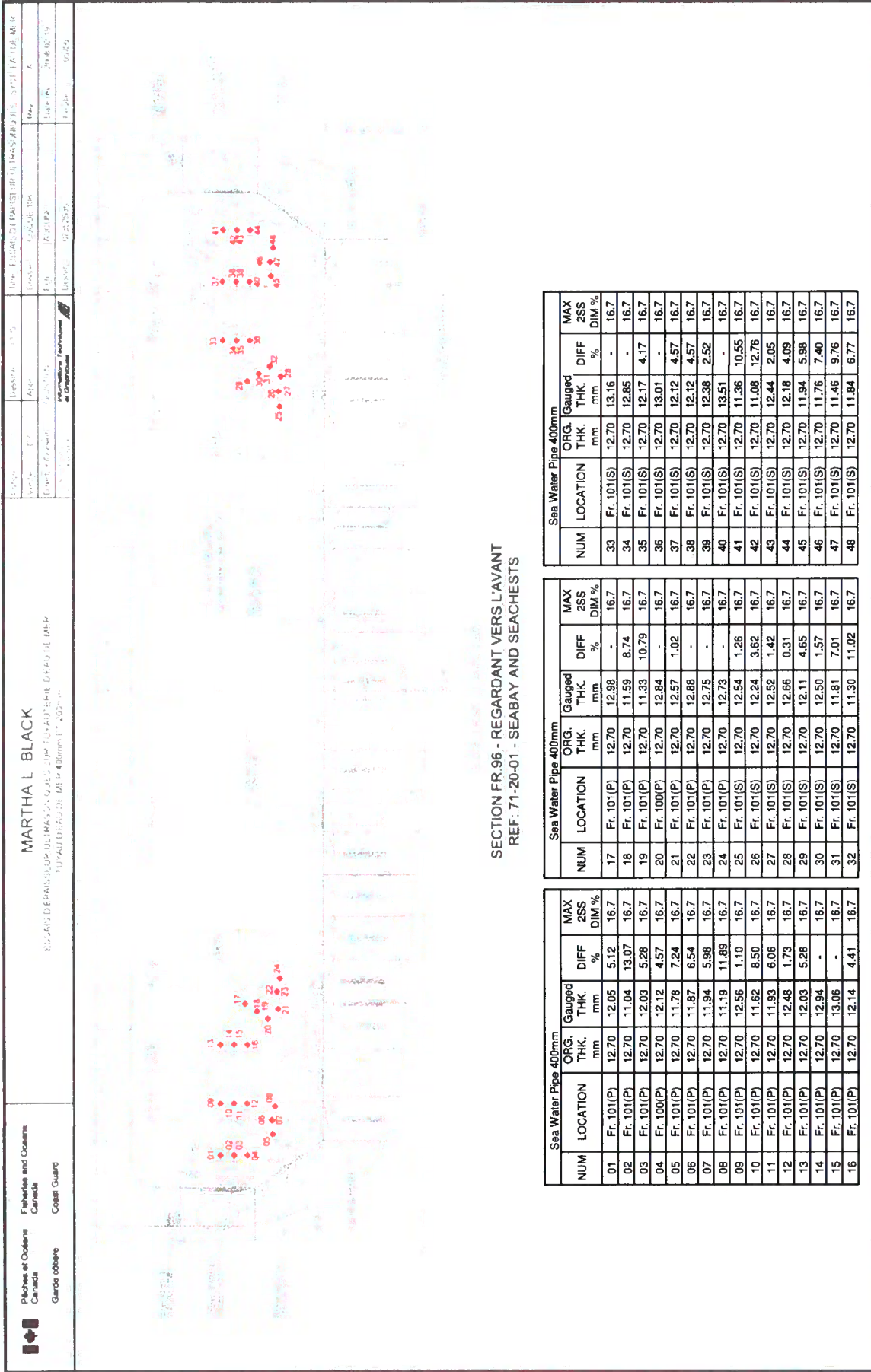
VUE EN PLAN - DESSUS DU DOUBLE-FOND
REF: 77-75-01 - PIPE MODULE NO. 14 ZONE 11



ELEVATION LOOKING TO PORT
ÉLÉVATION REGARDANT VERS BÂBORD

NUM	System Main S.W. Circulation					DIFF %	MAX DM %
	LOCATION	ORIG. THK. mm	Gauged THK. mm				
01	Fr. 104(P)	4.00	4.66	-	16.7		
02	Fr. 104(P)	4.00	4.21	-	16.7		
03	Fr. 104(P)	4.00	4.09	-	16.7		
04	Fr. 104(P)	4.00	4.30	-	16.7		
05	Fr. 104(P)	4.00	5.13	-	16.7		
06	Fr. 104(P)	4.00	3.47	13.25	16.7		
07	Fr. 104(P)	4.00	4.42	-	16.7		
08	Fr. 104(P)	4.00	3.41	14.75	16.7		
09	Fr. 104(P)	4.00	3.64	9.00	16.7		
10	Fr. 104(P)	4.00	4.42	-	16.7		
11	Fr. 104(P)	4.00	3.50	12.50	16.7		
12	Fr. 104(P)	4.00	3.60	10.00	16.7		
13	Fr. 102(P)	4.00	3.55	11.25	16.7		
14	Fr. 102(P)	4.00	3.61	9.75	16.7		
15	Fr. 102(P)	4.00	3.56	11.00	16.7		
16	Fr. 102(P)	4.00	3.62	9.50	16.7		
17	Fr. 102(P)	4.00	3.60	10.00	16.7		
18	Fr. 102(P)	4.00	3.47	13.25	16.7		
19	Fr. 102(P)	4.00	3.55	11.25	16.7		
20	Fr. 102(P)	4.00	3.69	7.75	16.7		
21	Fr. 102(P)	4.00	3.57	10.75	16.7		
22	Fr. 102(P)	4.00	3.51	12.22	16.7		

NUM	System Main S.W.Circulation				MAX 2SS DMM %
	LOCATION	ORG. THK. mm.	Gauged THK. mm.	DIFF %	
23	Fr. 102(P)	4.00	3.62	9.50	16.7
24	Fr. 102(P)	4.00	3.55	11.25	16.7
25	Fr. 102(P)	4.00	3.55	11.25	16.7
26	Fr. 102(P)	4.00	3.43	14.25	16.7
27	Fr. 102(P)	4.00	3.58	10.50	16.7
28	Fr. 102(P)	4.00	3.50	12.50	16.7
29	Fr. 101(P)	5.50	5.87	-	16.7
30	Fr. 101(P)	5.50	5.56	-	16.7
31	Fr. 101(P)	5.50	6.16	-	16.7
32	Fr. 101(P)	5.50	5.92	-	16.7
33	Fr. 102(P)	5.50	6.28	-	16.7
34	Fr. 102(P)	5.50	5.95	-	16.7
35	Fr. 104(P)	5.50	5.76	-	16.7
36	Fr. 104(P)	5.50	5.55	-	16.7
37	Fr. 101(P)	4.00	3.87	3.25	16.7
38	Fr. 101(P)	4.00	3.77	5.75	16.7
39	Fr. 101(P)	4.00	4.03	-	16.7
40	Fr. 101(P)	4.00	3.88	3.00	16.7
41	Fr. 101(P)	5.50	6.12	-	16.7
42	Fr. 101(P)	5.50	5.53	-	16.7
43	Fr. 101(P)	5.50	5.70	-	16.7
44	Fr. 101(P)	5.50	5.80	-	16.7



SECTION FR 96 - REGARDANT VERS L'AVANT
REF: 71-20-01 - SEABAY AND SEACHESTS

Sea Water Pipe 400mm						Sea Water Pipe 400mm						Sea Water Pipe 400mm					
NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %	NUM	LOCATION	ORG. THK. mm	Gauged THK. mm	DIFF %	MAX 2SS DIM %
01	Fr. 101(P)	12.70	12.05	5.12	16.7	17	Fr. 101(P)	12.70	12.98	-	16.7	33	Fr. 101(S)	12.70	13.16	-	16.7
02	Fr. 101(P)	12.70	11.04	13.07	16.7	18	Fr. 101(P)	12.70	11.59	8.74	16.7	34	Fr. 101(S)	12.70	12.85	-	16.7
03	Fr. 101(P)	12.70	12.03	5.28	16.7	19	Fr. 101(P)	12.70	11.33	10.79	16.7	35	Fr. 101(S)	12.70	12.17	4.17	16.7
04	Fr. 100(P)	12.70	12.12	4.57	16.7	20	Fr. 100(P)	12.70	12.84	-	16.7	36	Fr. 101(S)	12.70	13.01	-	16.7
05	Fr. 101(P)	12.70	11.78	7.24	16.7	21	Fr. 101(P)	12.70	12.57	1.02	16.7	37	Fr. 101(S)	12.70	12.12	4.57	16.7
06	Fr. 101(P)	12.70	11.87	6.54	16.7	22	Fr. 101(P)	12.70	12.88	-	16.7	38	Fr. 101(S)	12.70	12.12	4.57	16.7
07	Fr. 101(P)	12.70	11.94	5.98	16.7	23	Fr. 101(P)	12.70	12.75	-	16.7	39	Fr. 101(S)	12.70	12.38	2.52	16.7
08	Fr. 101(P)	12.70	11.19	11.89	16.7	24	Fr. 101(P)	12.70	12.73	-	16.7	40	Fr. 101(S)	12.70	13.51	-	16.7
09	Fr. 101(P)	12.70	12.56	1.10	16.7	25	Fr. 101(S)	12.70	12.54	1.26	16.7	41	Fr. 101(S)	12.70	11.36	10.55	16.7
10	Fr. 101(P)	12.70	11.62	8.50	16.7	26	Fr. 101(S)	12.70	12.24	3.62	16.7	42	Fr. 101(S)	12.70	11.08	12.76	16.7
11	Fr. 101(P)	12.70	11.93	6.06	16.7	27	Fr. 101(S)	12.70	12.52	1.42	16.7	43	Fr. 101(S)	12.70	12.44	2.05	16.7
12	Fr. 101(P)	12.70	12.48	1.73	16.7	28	Fr. 101(S)	12.70	12.66	0.31	16.7	44	Fr. 101(S)	12.70	12.18	4.09	16.7
13	Fr. 101(P)	12.70	12.03	5.28	16.7	29	Fr. 101(S)	12.70	12.11	4.65	16.7	45	Fr. 101(S)	12.70	11.94	5.98	16.7
14	Fr. 101(P)	12.70	12.94	-	16.7	30	Fr. 101(S)	12.70	12.50	1.57	16.7	46	Fr. 101(S)	12.70	11.76	7.40	16.7
15	Fr. 101(P)	12.70	13.06	-	16.7	31	Fr. 101(S)	12.70	11.81	7.01	16.7	47	Fr. 101(S)	12.70	11.46	9.76	16.7
16	Fr. 101(P)	12.70	12.14	4.41	16.7	32	Fr. 101(S)	12.70	11.30	11.02	16.7	48	Fr. 101(S)	12.70	11.84	6.77	16.7

