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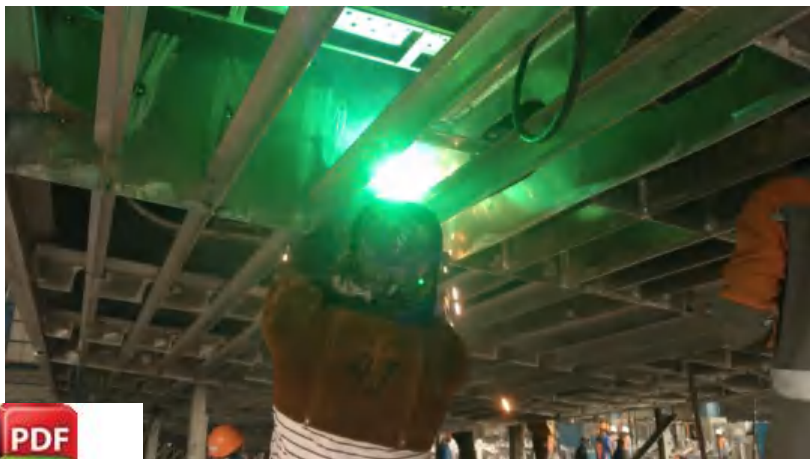
LAMPIRAN I DOKUMENTASI PENELITIAN



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**LAMPIRAN II *MASTER SCHEDULE* dan
GAMBAR KERJA KAPAL ALUMUNIUM
*CREW BOAT 42 M***



ID	Task Name	Duration	Start	Finish	2022	Qtr 1, 2023	Qtr 2, 2023	Qtr 3, 2023	Qtr 4, 2023	Qtr 1, 2024	Qtr 2, 2024	Qtr 3, 2024	Qtr 4, 2024	Qtr 1, 2025
					Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar
0	H469 - mFlex-42	409 days	Thu 13/07/23	Sat 24/08/24			13/07							24/08
1	Milestone Summary	373 days	Fri 18/08/23	Sat 24/08/24					18/08					24/08
2	Keel laying date	0 days	Fri 18/08/23	Fri 18/08/23					18/08					
3	Launching	0 days	Fri 28/06/24	Fri 28/06/24									28/06	
4	Sea Acceptance Trial	0 days	Fri 02/08/24	Fri 02/08/24									02/08	
5	Delivery	0 days	Sat 24/08/24	Sat 24/08/24									24/08	
6														
7	Critical Equipment and Materials	324 days	Thu 13/07/23	Sat 01/06/24										01/06
8	CNC Unit 2 (Mid Body - Fr. 13 - Fr. 22)	0 days	Fri 11/08/23	Fri 11/08/23					11/08					
9	CNC Unit 3 (Mid Body to Bow Thruster - Fr. 22 - Fr. 29)	0 days	Tue 05/09/23	Tue 05/09/23					05/09					
10	CNC Unit 1 Lower (Engine room and Steering gear room - Fr. 0 - Fr. 13)	0 days	Fri 10/11/23	Fri 10/11/23					10/11					
11	CNC Unit 1 Upper (Engine room and Steering gear room - Fr. 0 - Fr. 13)	0 days	Sat 04/11/23	Sat 04/11/23					04/11					
12	CNC Unit 4 (Bow - Fr. 29 - Fr. 34)	0 days	Thu 13/07/23	Thu 13/07/23					13/07					
13	CNC Unit 6 (Superstructure Main Deck) and Unit 5 (Bulwark)	0 days	Tue 05/09/23	Tue 05/09/23					05/09					
14	CNC Unit 7 (Wheelhouse)	0 days	Thu 13/07/23	Thu 13/07/23					13/07					
15	CNC Unit 8 (Mast)	0 days	Thu 13/07/23	Thu 13/07/23					13/07					
16	Bow thruster tunnel and motor	0 days	Thu 07/12/23	Thu 07/12/23					07/12					
17	Replacement bow thruster tunnel and motor	0 days	Sat 06/04/24	Sat 06/04/24					06/04					
18	Manhole hatches	0 days	Thu 08/02/24	Thu 08/02/24					08/02					
19	Stern tube and rudder trunk	0 days	Sat 04/05/24	Sat 04/05/24					04/05					
20	Propellers, I-bracket	0 days	Sat 01/06/24	Sat 01/06/24					01/06					
21	Shafts	0 days	Sat 01/06/24	Sat 01/06/24					01/06					
22	Main switchboard and DB panels	0 days	Sat 04/05/24	Sat 04/05/24					04/05					
23	Watertight and weathertight doors	0 days	Fri 23/02/24	Fri 23/02/24					23/02					
24	Generators	0 days	Tue 14/05/24	Tue 14/05/24					14/05					
25	CNC for draft mark, plimsol mark and vessel name	0 days	Sat 09/03/24	Sat 09/03/24					09/03					
26	Oily water separator	0 days	Sat 09/03/24	Sat 09/03/24					09/03					
27	Fuel oil purifier	0 days	Sat 09/03/24	Sat 09/03/24					09/03					
28	Sewage treatment plant	0 days	Sat 09/03/24	Sat 09/03/24					09/03					
29	Main engines and gearbox	0 days	Fri 24/05/24	Fri 24/05/24					24/05					
30	Fire pump and GS pump (Desmi)	0 days	Tue 19/03/24	Tue 19/03/24					19/03					
31	Windlass, anchor and chain	0 days	Tue 19/03/24	Tue 19/03/24					19/03					
32	Non-ballistic window	0 days	Tue 19/03/24	Tue 19/03/24					19/03					
33	Fi-fi pump and external fi-fi	0 days	Fri 29/03/24	Fri 29/03/24					29/03					
34	Gyro stabiliser	0 days	Sat 04/05/24	Sat 04/05/24					04/05					
35	Engine room fan and fire damper	0 days	Fri 29/03/24	Fri 29/03/24					29/03					
36	Steering gear tiller and hydraulic powerpack unit	0 days	Mon 27/05/24	Mon 27/05/24					27/05					
37	Davit crane and workboat	0 days	Mon 29/04/24	Mon 29/04/24					29/04					
38	Passenger seats	0 days	Sat 13/04/24	Sat 13/04/24					13/04					
39	Tyre fenders	0 days	Sun 21/04/24	Sun 21/04/24					21/04					
40	Life saving appliance	0 days	Mon 06/05/24	Mon 06/05/24					06/05					
41														
42	Keel Lay	1 day	Fri 18/08/23	Fri 18/08/23					18/08					
43	Construction phase	380 days	Fri 11/08/23	Sat 24/08/24										24/08
44		196 days	Fri 11/08/23	Thu 22/02/24										
45		40 days	Fri 11/08/23	Tue 19/09/23										
46		40 days	Wed 06/09/23	Sun 15/10/23										
47		30 days	Tue 26/09/23	Wed 25/10/23										
48		30 days	Fri 10/11/23	Sat 09/12/23										
49		30 days	Sat 25/11/23	Sun 24/12/23										
50		60 days	Mon 25/12/23	Thu 22/02/24										
51		40 days	Fri 06/10/23	Tue 14/11/23										
52		40 days	Wed 15/11/23	Sun 24/12/23										
53		40 days	Thu 26/10/23	Mon 04/12/23										
54		60 days	Mon 25/12/23	Thu 22/02/24										
55		185 days	Tue 05/12/23	Thu 06/06/24										
56		20 days	Tue 05/12/23	Sun 24/12/23										
57		20 days	Thu 08/02/24	Tue 27/02/24										
58														



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LAMPIRAN III WPS (WELDING PROCEDURE SPECIFICATION) and *WELD ARRANGEMENT*



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PT. KIM SEAH SHIPYARD INDONESIA

Kawasan Industri Sekupang, Tg. Riau No. 61 Batam - Indonesia

WELDING PROCEDURE SPECIFICATION (WPS)

Company Name	PT. KIM SEAH SHIPYARD INDONESIA	WPS No.	KSSI-WPS-001
Welding Process	GMAW (MIG)	Supporting PQR No.	KSSI-PQR-001
Type	Semi Automatic	Prepared by	Ichwan
Approved by	ABS	Reviewed By	Mr. Scott Poon
		Date	July 26th 2011

JOINT DESIGN

Type : Butt Joint (Single V Groove)
 Single Double

Backing : No
 Backing Material : -

Root opening : 0 ~ 3 mm Root Face Dimension : 0 ~ 3 mm
 Groove angle : 45° - 60° Radius (J - U) : -
 Back gouging : Yes No Method : Grind

POSITION

Position : 3 G
 Progression : Uphill

Transfer Mode : Short Circuiting
 Globular
 Spray
 Pulsed
 Current : AC DCEP DCEN
 Other : N/A

BASE METAL

Material Spec. : SB - 209
 Type of Grade : A5083 H116
 Thickness Range : Groove 3.0 mm - Unlimited Fillet : All
 Diameter Range : N/A

TECHNIQUE

String or Weave Bead : String/Weaving max 3,0xcore OD
 Multi pass or single pass : Multipass
 Number of Electrode : -
 Electrodes Spacing : Longitudinal : N/A
 Lateral : N/A
 Angle : N/A

Contact tube to work distance : 5 mm ~ 10 mm
 Peening : N/A
 Interpass Cleaning : Wire Brush

FILLER METAL

Spec. No (SFA) : A - 5.10
 F - No. : 22
 A - No. : ER 5183

SHIELDING

Flux :- Gas : Argon
 Composition : 99.99% Pure Argon
 Electrode-flux (class) : Flow rate : 0 ~ 40 CFM
 Gas cup size : 3/8" ~ 1/2"

PREHEAT

Preheat Temperature : Ambient Temperature
 Interpass Temperature : 65°C Max : 200°C

POST WELD HEAD TREATMENT

Temp. : N/A
 Time : -

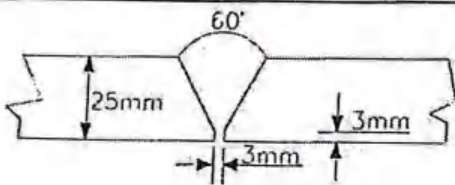
WELDING PROCEDURE

Pass No	Process	Filler Metal		Volts	Ampere Range	Type	Travel Speed
		Class	Diameter				
Cover Pass (4)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	180 ~ 220	DCEP	60-90
Fill Pass (3)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	180 ~ 220	DCEP	55-80
Hot Pass (2)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	190 ~ 230	DCEP	55-80
Root Pass (1)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	200 ~ 240	DCEP	50-70

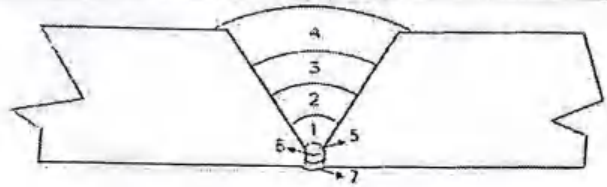
Back Gouging with Grinding Machine

Hot Pass (5)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	190 ~ 230	DCEP	55-80
Fill Pass (6)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	180 ~ 220	DCEP	55-80
Cover Pass (7)	GMAW (MIG)	ER.5183	1.2mm	18 ~ 25	180 ~ 220	DCEP	60-90

Joint Detail



Welding Sequence



red by

YARD INDONESIA

ngineer

26/7

AM SEAH SHIPYARD INDONESIA

1828

Engineering

Accepted by:

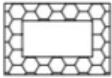
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Didik Harijadi

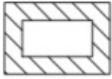
Approved by
American Bureau of Shipping
Surveyor

Bambang Alwi
ABS Surveyor

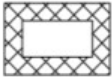
2 LEGEND



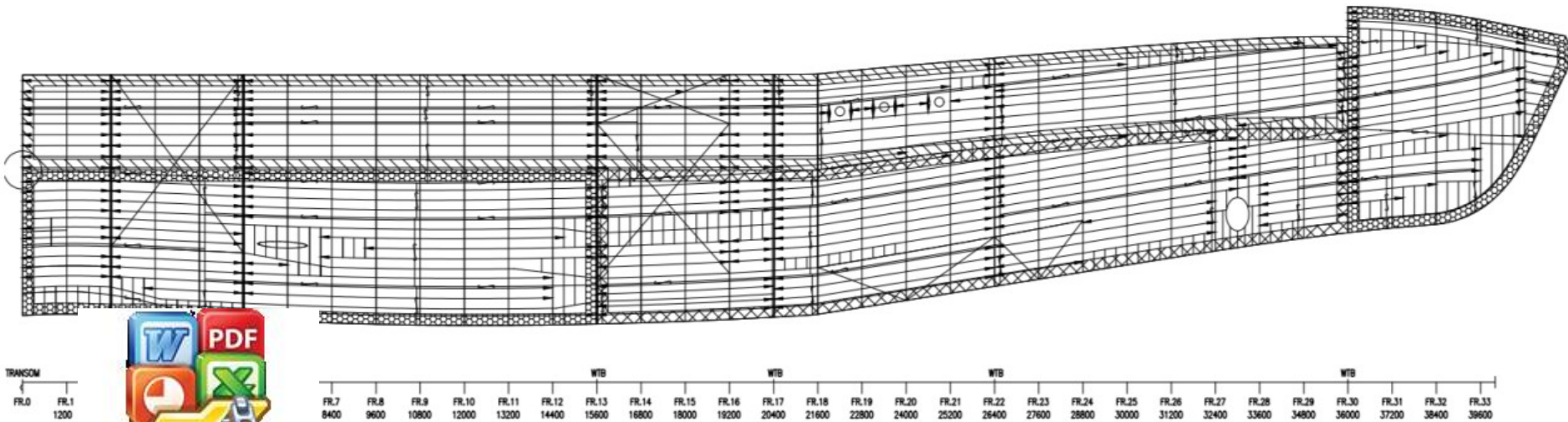
INSIDE OF BOUNDARIES TO BE DOUBLE CONTINUOUSLY WELDED



INSIDE OF BOUNDARIES STIFFENERS TO BE STAGGER INTERMITTENTLY WELDED WITH WELD PATTERN '330-110' DEFINED IN DETAIL 'A3' ON SHT 3. EXCEPT FOR ENDS, CROSSOVERS AND BRACKET CONNECTIONS SEE NOTE 3.



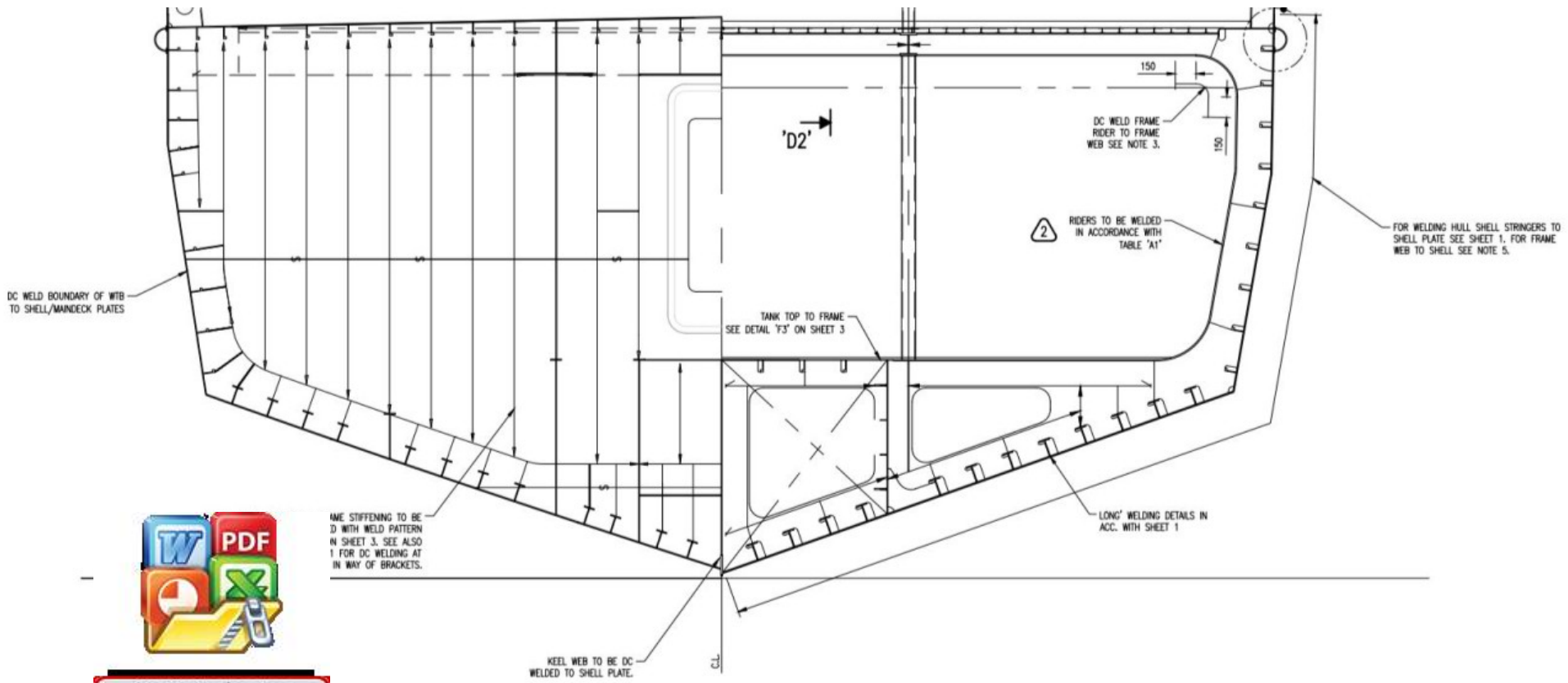
INSIDE OF BOUNDARIES STIFFENERS TO BE STAGGER INTERMITTENTLY WELDED WITH WELD PATTERN '330-150' DEFINED IN DETAIL 'B3' ON SHT 3. EXCEPT FOR ENDS, CROSSOVERS AND BRACKET CONNECTIONS SEE NOTE 3.



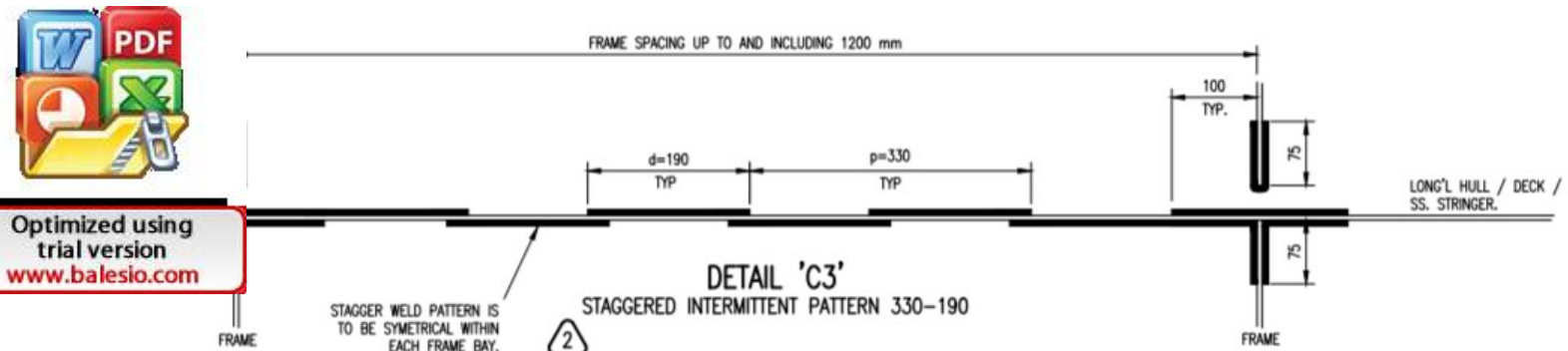
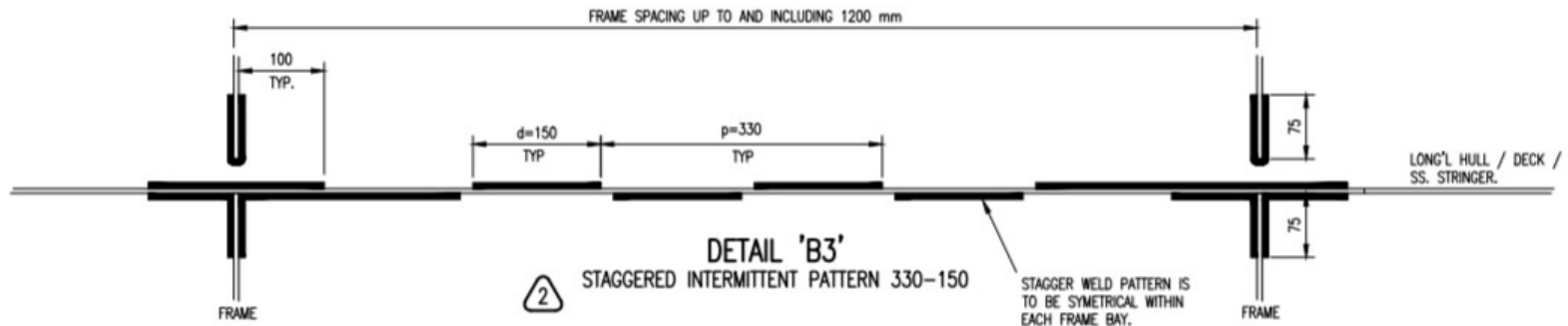
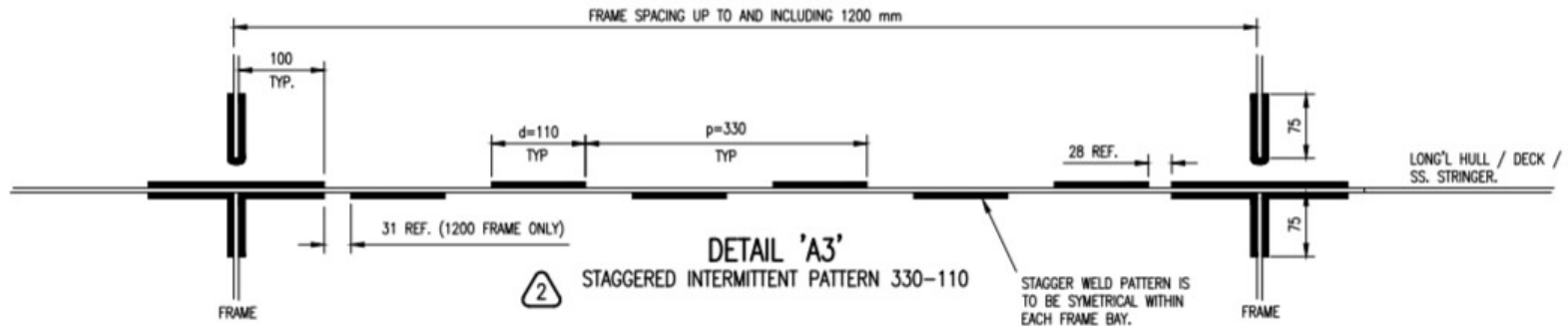
PORT SIDE SHELL EXPANSION

LOOKING TO PORT
STARBOARD SIDE HANDED

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LAMPIRAN IV PBWS



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No	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)			
				Breath (mm)	Thickness (mm)							
		SB-F/				B1/SB-F/						
		SB-F/				B1/SB-F/						
	side	LF/B/				B1/SB-F/LF/B/						
	om Portside	Ps/				B1/SB-F/LF/B/Ps/						
		1	B1/SB-F/LF/B/Ps/1	100x65	6	4800	954	4579200	0,0125			
		2	B1/SB-F/LF/B/Ps/2	100x65	6	4800	954	4579200	0,0125			
		3	B1/SB-F/LF/B/Ps/3	100x65	6	4800	954	4579200	0,0125			
		4	B1/SB-F/LF/B/Ps/4	100x65	6	4800	954	4579200	0,0125			
		5	B1/SB-F/LF/B/Ps/5	100x65	6	4800	954	4579200	0,0125			
		6	B1/SB-F/LF/B/Ps/6	100x65	6	4800	954	4579200	0,0125			
		7	B1/SB-F/LF/B/Ps/7	100x65	6	4800	954	4579200	0,0125			
		8	B1/SB-F/LF/B/Ps/8	100x65	6	4800	954	4579200	0,0125			
		9	B1/SB-F/LF/B/Ps/9	100x65	6	4800	954	4579200	0,0125			
		10	B1/SB-F/LF/B/Ps/10	100x65	6	4800	954	4579200	0,0125			
		11	B1/SB-F/LF/B/Ps/11	100x65	6	4800	954	4579200	0,0125			
		Long Frame Side Shell Portside	LF/Ss1/Ps/			B1/SB-F/LF/Ss1/Ps/						
		1 LF/Ps/Ss1	B1/SB-F/LF/Ss1/Ps/1	85	5	4800	648,28	3111744	0,0085			
		2 LF/Ps/Ss2	B1/SB-F/LF/Ss1/Ps/2	85	5	4800	648,28	3111744	0,0085			
		3 LF/Ps/Ss3	B1/SB-F/LF/Ss1/Ps/3	85	5	4800	648,28	3111744	0,0085			
		4 LF/Ps/Ss4	B1/SB-F/LF/Ss1/Ps/4	85	5	4800	648,28	3111744	0,0085			
		5 LF/Ps/Ss5	B1/SB-F/LF/Ss1/Ps/5	85	5	4800	648,28	3111744	0,0085			
		6 LF/Ps/Ss6	B1/SB-F/LF/Ss1/Ps/6	85	5	4800	648,28	3111744	0,0085			
		7 LF/Ps/Ss7	B1/SB-F/LF/Ss1/Ps/7	85	5	4800	648,28	3111744	0,0085			
		8 LF/Ps/Ss8	B1/SB-F/LF/Ss1/Ps/8	85	5	4800	648,28	3111744	0,0085			
		9 LF/Ps/Ss9	B1/SB-F/LF/Ss1/Ps/9	85	5	4800	648,28	3111744	0,0085			
	A.1.2	Long Frame Starboard	LF/B/			B1/SB-F/LF/B/						
		Long Frame Bottom Starboard	Sb/			B1/SB-F/LF/B/Sb/						
		1 LF/Ps/B1	B1/SB-F/LF/B/Sb/1	100x65	6	4800	954	4579200	0,0125			
		2 LF/Ps/B2	B1/SB-F/LF/B/Sb/2	100x65	6	4800	954	4579200	0,0125			
		3 LF/Ps/B3	B1/SB-F/LF/B/Sb/3	100x65	6	4800	954	4579200	0,0125			
		4 LF/Ps/B4	B1/SB-F/LF/B/Sb/4	100x65	6	4800	954	4579200	0,0125			
		5 LF/Ps/B5	B1/SB-F/LF/B/Sb/5	100x65	6	4800	954	4579200	0,0125			
		6 LF/Ps/B6	B1/SB-F/LF/B/Sb/6	100x65	6	4800	954	4579200	0,0125			
		7 LF/Ps/B7	B1/SB-F/LF/B/Sb/7	100x65	6	4800	954	4579200	0,0125			
		8 LF/Ps/B8	B1/SB-F/LF/B/Sb/8	100x65	6	4800	954	4579200	0,0125			
		9 LF/Ps/B9	B1/SB-F/LF/B/Sb/9	100x65	6	4800	954	4579200	0,0125			
		10 LF/Ps/B10	B1/SB-F/LF/B/Sb/10	100x65	6	4800	954	4579200	0,0125			
		11 LF/Ps/B11	B1/SB-F/LF/B/Sb/11	100x65	6	4800	954	4579200	0,0125			
		Long Frame Side Shell Starboard	LF/Ss1/Sb/			B1/SB-F/LF/Ss1/Sb/						
		1 LF/Ps/Ss1	B1/SB-F/LF/Ss1/Sb/1	85	5	4800	648,28	3111744	0,0085			
		2 LF/Ps/Ss2	B1/SB-F/LF/Ss1/Sb/2	85	5	4800	648,28	3111744	0,0085			
		3 LF/Ps/Ss3	B1/SB-F/LF/Ss1/Sb/3	85	5	4800	648,28	3111744	0,0085			
		4 LF/Ps/Ss4	B1/SB-F/LF/Ss1/Sb/4	85	5	4800	648,28	3111744	0,0085			
		5 LF/Ps/Ss5	B1/SB-F/LF/Ss1/Sb/5	85	5	4800	648,28	3111744	0,0085			
		6 LF/Ps/Ss6	B1/SB-F/LF/Ss1/Sb/6	85	5	4800	648,28	3111744	0,0085			
		7 LF/Ps/Ss7	B1/SB-F/LF/Ss1/Sb/7	85	5	4800	648,28	3111744	0,0085			
		8 LF/Ps/Ss8	B1/SB-F/LF/Ss1/Sb/8	85	5	4800	648,28	3111744	0,0085			
		9 LF/Ps/Ss9	B1/SB-F/LF/Ss1/Sb/9	85	5	4800	648,28	3111744	0,0085			
	A.2	Transverse Frame										
	A.2.1	Transverse Frame 14	TF/Fr14/			B1/SB-F/TF/Fr14/						
	a.	Transverse Frame 14 Centerline	CI/			B1/SB-F/TF/Fr14/CI/						
			B/			B1/SB-F/TF/Fr14/CI/B/						
		1	CL Bottom	Plate	WP	B1/SB-F/TF/Fr14/CI/B/WP	-	5	-	434884,93	2174424,65	0,0059
				FP	B1/SB-F/TF/Fr14/CI/B/FP	80	1407,17	8	640	900588,8	0,002452	
					TT/	B1/SB-F/TF/Fr14/CI/TT/						
		2	CL TankTop	Plate	WP	B1/SB-F/TF/Fr14/CI/TT/WP	-	8	-	134694,16	1077553,28	0,0029
				FP	B1/SB-F/TF/Fr14/CI/TT/FP	60	1310,3201	8	480	628953,648	0,001713	
					Ps/	B1/SB-F/TF/Fr14/Ps/						
					SA/	B1/SB-F/TF/Fr14/Ps/SA/						
		1	Section A	Plate	WP1	B1/SB-F/TF/Fr14/Ps/SA/WP1	-	8	-	168409,343	1347274,745	0,0037
					WP2	B1/SB-F/TF/Fr14/Ps/SA/WP2	-	5	-	292865,478	1464327,39	0,0040
					FP	B1/SB-F/TF/Fr14/Ps/SA/FP	80	8	1299,288	640	831544,32	0,0023
					SB/	B1/SB-F/TF/Fr14/Ps/SB/						
		2	Section B	Plate	WP1	B1/SB-F/TF/Fr14/Ps/SB/WP1	-	8	-	168409,3431	1347274,745	0,0037



No	Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
					Breath (mm)	Thickness (mm)					
			WP2	B1/SB-F/TF/Fr14/Ps/SB/WP2	-	5	-	818800,5392	4094002,696	0,0111	
			FP	B1/SB-F/TF/Fr14/Ps/SB/FP	60	8	1299,2877	480	623658,096	0,0017	
			SS1/				B1/SB-F/TF/Fr14/Ps/SS1/				
	Side Shell 1	Plate	WP	B1/SB-F/TF/Fr14/Ps/SS1/WP	-	5	-	1092041,757	5460208,783	0,0149	
			FP	B1/SB-F/TF/Fr14/Ps/SS1/FP	80	8	3192,6945	640	2043324,48	0,0056	
			SS2/				B1/SB-F/TF/Fr14/Ps/SS2/				
	Side Shell 2	Plate	WP	B1/SB-F/TF/Fr14/Ps/SS2/WP	-	5	-	844179,6262	4220898,131	0,0115	
			FP	B1/SB-F/TF/Fr14/Ps/SS2/FP	80	8	2796,98	640	1790067,2	0,0049	
	Transverse Frame 14 Starboard		Sb/				B1/SB-F/TF/Fr14/Sb/				
			SA/				B1/SB-F/TF/Fr14/Sb/SA/				
	1	Section A	Plate	WP	B1/SB-F/TF/Fr14/Sb/SA/WP	-	8	-	699063,356	5592506,85	0,0152
			SB/				B1/SB-F/TF/Fr14/Sb/SB/				
	2	Section B	Plate	WP1	B1/SB-F/TF/Fr14/Sb/SB/WP1	-	8	-	168409,3431	1347274,745	0,0037
			WP2	B1/SB-F/TF/Fr14/Sb/SB/WP2	-	5	-	818800,5392	4094002,696	0,0111	
			FP	B1/SB-F/TF/Fr14/Sb/SB/FP	60	8	1299,2877	480	623658,096	0,0017	
			SS1/				B1/SB-F/TF/Fr14/Sb/SS1/				
	3	Side Shell 1	Plate	WP	B1/SB-F/TF/Fr14/Sb/SS1/WP	-	5	-	1092041,757	5460208,783	0,0149
			FP	B1/SB-F/TF/Fr14/Sb/SS1/FP	80	8	3192,6945	640	2043324,48	0,0056	
			SS2/				B1/SB-F/TF/Fr14/Sb/SS2/				
	4	Side Shell 2	Plate	WP	B1/SB-F/TF/Fr14/Sb/SS2/WP	-	5	-	844179,6262	4220898,131	0,0115
			FP	B1/SB-F/TF/Fr14/Sb/SS2/FP	80	8	2796,98	640	1790067,2	0,0049	
	A.2.2	Transverse Frame 14.6		TF/Fr14.6/			B1/SB-F/TF/Fr14.6/				
	a.	Transverse Frame 14.6 Centerline		CI/			B1/SB-F/TF/Fr14.6/CI/				
				B/			B1/SB-F/TF/Fr14.6/CI/B/				
	1	CL Bottom	Plate	WP1	B1/SB-F/TF/Fr14.6/CI/B/WP1	-	15	-	761776,749	11426651,24	0,0311
			WP2	B1/SB-F/TF/Fr14.6/CI/B/WP2	-	30	-	782594,85	23477845,5	0,063930	
	b.	Transverse Frame 14.6 Portside		Ps/			B1/SB-F/TF/Fr14.6/Ps/				
				SA/			B1/SB-F/TF/Fr14.6/Ps/SA/				
	1	Section A	Plate	WP1	B1/SB-F/TF/Fr14.6/Ps/SA/WP1	-	15	-	308459,827	4626897,405	0,0126
			WP2	B1/SB-F/TF/Fr14.6/Ps/SA/WP2	-	30	-	165542,467	4966274,01	0,0135	
			WP3	B1/SB-F/TF/Fr14.6/Ps/SA/WP3	-	50	-	200058,6	10002930	0,0272	
			SB/				B1/SB-F/TF/Fr14.6/Ps/SB/				
	2	Section B	Plate	WP1	B1/SB-F/TF/Fr14.6/Ps/SB/WP1	-	15	-	565173,734	8477606,01	0,0231
			WP2	B1/SB-F/TF/Fr14.6/Ps/SB/WP2	-	30	-	617465,374	18523961,22	0,0504	
			WP3	B1/SB-F/TF/Fr14.6/Ps/SB/WP3	-	50	-	116486,858	5824342,9	0,0159	
	3	Side Shell 1	SS1/	SS1/FP	B1/SB-F/TF/Fr14.6/Ps/SS1/FP	-	15	-	397814,5153	5967217,73	0,0162
			Plate	SS1/WP	B1/SB-F/TF/Fr14.6/Ps/SS1/WP	-	15	-	535441,322	8031619,83	0,0219
		Transverse Frame 14.6 Starboard		Sb/			B1/SB-F/TF/Fr14.6/Sb/				
				SA/			B1/SB-F/TF/Fr14.6/Sb/SA/				
	1	Section A	Plate	WP1	B1/SB-F/TF/Fr14.6/Sb/SA/WP1	-	15	-	308459,827	4626897,405	0,0126
			WP2	B1/SB-F/TF/Fr14.6/Sb/SA/WP2	-	30	-	165542,467	4966274,01	0,0135	
			WP3	B1/SB-F/TF/Fr14.6/Sb/SA/WP3	-	50	-	200058,6	10002930	0,0272	
	2	Section B		SB/			B1/SB-F/TF/Fr14.6/Sb/SB/				
			Plate	WP1	B1/SB-F/TF/Fr14.6/Sb/SB/WP1	-	15	-	565173,734	8477606,01	0,0231
			WP2	B1/SB-F/TF/Fr14.6/Sb/SB/WP2	-	30	-	617465,374	18523961,22	0,0504	
			WP3	B1/SB-F/TF/Fr14.6/Sb/SB/WP3	-	50	-	116486,858	5824342,9	0,0159	
	3	Side Shell 1	SS1/	SS1/FP	B1/SB-F/TF/Fr14.6/Ps/SS1/FP	-	15	-	397814,5153	5967217,73	0,0162
			Plate	SS1/WP	B1/SB-F/TF/Fr14.6/Ps/SS1/WP	-	15	-	535441,322	8031619,83	0,0219
	A.2.3	Transverse Frame 15		TF/Fr15/			B1/SB-F/TF/Fr15/				
	a.	Transverse Frame 15 Centerline		CI/			B1/SB-F/TF/Fr15/CI/				
				B/			B1/SB-F/TF/Fr15/CI/B/				
	1	CL Bottom	Plate	WP	B1/SB-F/TF/Fr15/CI/B/WP	-	5	-	463847,954	2319239,77	0,0063
			FP	B1/SB-F/TF/Fr15/CI/B/FP	80	8	1407,1745	640	900591,68	0,002452	
	2	CL TankTop	Plate	WP	B1/SB-F/TF/Fr15/CI/B/TT/WP	-	8	-	134816,4001	1078531,201	0,0029
			FP	B1/SB-F/TF/Fr15/CI/B/TT/FP	80	8	1279,025	640	818576	0,002229	
	b.	Transverse Frame 15 Portside		Ps/			B1/SB-F/TF/Fr15/Ps/				
				SA/			B1/SB-F/TF/Fr15/Ps/SA/				
	1	Section A	Plate	WP1	B1/SB-F/TF/Fr15/Ps/SA/WP1	-	8	-	169109,343	1352874,745	0,0037
			WP2	B1/SB-F/TF/Fr15/Ps/SA/WP2	-	5	-	298133,6977	1490668,489	0,0041	
			FP	B1/SB-F/TF/Fr15/Ps/SA/FP	80	8	1290,8176	640	826123,264	0,0022	
			SB/				B1/SB-F/TF/Fr15/Ps/SB/				
	2	Section B	Plate	WP1	B1/SB-F/TF/Fr15/Ps/SB/WP1	-	8	-	137301,5431	1098412,345	0,0030



No	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
	Plate	WP2	B1/SB-F/TF/Fr15/Ps/SB/WP2	-	5	-	814454,6212	4072273,106	0,0111	
		FP	B1/SB-F/TF/Fr15/Ps/SB/FP	80	8	2210,26	640	1414566,4	0,0039	
Side Shell 1	Plate	SS1/ WP	B1/SB-F/TF/Fr15/Ps/SS1/WP	-	5	-	1070072,441	5350362,207	0,0146	
		SS1/ FP	B1/SB-F/TF/Fr15/Ps/SS1/FP	80	8	3088,4376	640	1976600,064	0,0054	
Side Shell 2	Plate	SS2/ WP	B1/SB-F/TF/Fr15/Ps/SS2/WP	-	5	-	851390,8999	4256954,5	0,0116	
		SS2/ FP	B1/SB-F/TF/Fr15/Ps/SS2/FP	80	8	2795,7297	640	1789267,008	0,0049	
Transverse Frame 15 Starboard		Sb/ SA/				B1/SB-F/TF/Fr15/Sb/				
1	Section A	Plate	WP1	B1/SB-F/TF/Fr15/Sb/SA/WP1	-	8	-	169109,343	1352874,745	0,0037
			WP2	B1/SB-F/TF/Fr15/Sb/SA/WP2	-	5	-	298133,6977	1490668,489	0,0041
			FP	B1/SB-F/TF/Fr15/Sb/SA/FP	80	8	1290,8176	640	826123,264	0,0022
			SB/					B1/SB-F/TF/Fr15/Sb/SB/		
2	Section B	Plate	WP1	B1/SB-F/TF/Fr15/Sb/SB/WP1	-	8	-	137301,5431	1098412,345	0,0030
			WP2	B1/SB-F/TF/Fr15/Sb/SB/WP2	-	5	-	814454,6212	4072273,106	0,0111
			FP	B1/SB-F/TF/Fr15/Sb/SB/FP	80	8	2210,26	640	1414566,4	0,0039
3	Side Shell 1	Plate	SS1/ WP	B1/SB-F/TF/Fr15/Sb/SS1/WP	-	5	-	1070072,441	5350362,207	0,0146
			SS1/ FP	B1/SB-F/TF/Fr15/Sb/SS1/FP	80	8	3088,4376	640	1976600,064	0,0054
4	Side Shell 2	Plate	SS2/ WP	B1/SB-F/TF/Fr15/Sb/SS2/WP	-	5	-	851390,8999	4256954,5	0,0116
			SS2/ FP	B1/SB-F/TF/Fr15/Sb/SS2/FP	80	8	2795,7297	640	1789267,008	0,0049
A.2.4 Transverse Frame 16		TF/Fr16/				B1/SB-F/TF/Fr16/				
a. Transverse Frame 16 Centerline		C/ B/				B1/SB-F/TF/Fr16/C/				
1	CL Bottom	Plate	WP1	B1/SB-F/TF/Fr16/C/ WP1	-	15	-	848549,6382	12728244,57	0,0347
			WP2	B1/SB-F/TF/Fr16/C/ WP2	-	30	-	786472,8408	23594185,22	0,064247
b. Transverse Frame 16 Portside		Ps/ SA/				B1/SB-F/TF/Fr16/Ps/				
1	Section A	Plate	WP1	B1/SB-F/TF/Fr16/Ps/SA/WP1	-	15	-	313471,381	4702070,711	0,0128
			WP2	B1/SB-F/TF/Fr16/Ps/SA/WP2	-	30	-	165542,4668	4966274,004	0,0135
			WP3	B1/SB-F/TF/Fr16/Ps/SA/WP3	-	50	-	203936,9192	10196845,96	0,0278
2	Section B	Plate	SB/ WP1	B1/SB-F/TF/Fr16/Ps/SB/WP1	-	15	-	577906,2462	8668593,693	0,0236
			SB/ WP2	B1/SB-F/TF/Fr16/Ps/SB/WP2	-	30	-	622274,8842	18668246,53	0,0508
			SB/ WP3	B1/SB-F/TF/Fr16/Ps/SB/WP3	-	50	-	120329,164	6016458,2	0,0164
3	Side Shell 1	Plate	SS1/ SS1/FP	B1/SB-F/TF/Fr16/Ps/SS1/FP	-	15	-	355463,46	5331951,9	0,0145
			SS1/ WP	B1/SB-F/TF/Fr16/Ps/SS1/WP	-	15	-	497829,4143	7467441,215	0,0203
4	Side Shell 2	Plate	SS2/ WP	B1/SB-F/TF/Fr16/Ps/SS2/WP	-	5	-	1231843,353	6159216,767	0,0168
			Bulb Plat S1	B1/SB-F/TF/Fr16/Ps/S1	85	5	942,58	648,28	611055,7624	0,0017
			Bulb Plat S2	B1/SB-F/TF/Fr16/Ps/S2	85	5	939,973	648,28	609365,6964	0,0017
			Bulb Plat S3	B1/SB-F/TF/Fr16/Ps/S3	85	5	939,973	648,28	609365,6964	0,0017
			SS3/					B1/SB-F/TF/Fr16/Ps/SS3/		
5	Side Shell 3	Bulb Plat	S1	B1/SB-F/TF/Fr16/Ps/SS2/S1	85	5	1190,686	648,28	771897,9201	0,0021
			S2	B1/SB-F/TF/Fr16/Ps/SS2/S2	85	5	1198,121	648,28	776717,8819	0,0021
			S3	B1/SB-F/TF/Fr16/Ps/SS2/S3	85	5	1203,746	648,28	780364,4569	0,0021
			WP	B1/SB-F/TF/Fr16/Ps/SS3/WP	-	6	-	1715048,76	10290292,56	0,0280
c. Transverse Frame 16 Starboard		Sb/ SA/				B1/SB-F/TF/Fr16/Sb/				
1	Section A	Plate	WP1	B1/SB-F/TF/Fr16/Sb/SA/WP1	-	15	-	313471,381	4702070,711	0,0128
			WP2	B1/SB-F/TF/Fr16/Sb/SA/WP2	-	30	-	165542,4668	4966274,004	0,0135
			WP3	B1/SB-F/TF/Fr16/Sb/SA/WP3	-	50	-	203936,9192	10196845,96	0,0278
2	Section B	Plate	SB/ WP1	B1/SB-F/TF/Fr16/Sb/SB/WP1	-	15	-	577906,2462	8668593,693	0,0236
			SB/ WP2	B1/SB-F/TF/Fr16/Sb/SB/WP2	-	30	-	622274,8842	18668246,53	0,0508
			SB/ WP3	B1/SB-F/TF/Fr16/Sb/SB/WP3	-	50	-	120329,164	6016458,2	0,0164
3	Side Shell 1	Plate	SS1/ SS1/FP	B1/SB-F/TF/Fr16/Sb/SS1/FP	-	15	-	355463,46	5331951,9	0,0145
			SS1/ WP	B1/SB-F/TF/Fr16/Sb/SS1/WP	-	15	-	497829,4143	7467441,215	0,0203
4	Side Shell 2	Plate	SS2/ WP	B1/SB-F/TF/Fr16/Sb/SS2/WP	-	5	-	1231843,353	6159216,767	0,0168
			Bulb Plat S1	B1/SB-F/TF/Fr16/Ps/S1	85	5	942,58	648,28	611055,7624	0,0017



na	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)
				Breath (mm)	Thickness (mm)				
	Bulb Plat	S2	B1/SB-F/TF/Fr16/Ps/S2	85	5	939,973	648,28	609365,6964	0,0017
	Bulb Plat	S3	B1/SB-F/TF/Fr16/Ps/S3	85	5	939,973	648,28	609365,6964	0,0017
		SS3/				B1/SB-F/TF/Fr16/Sb/SS3/			
	Bulb Plat	S1	B1/SB-F/TF/Fr16/Ps/SS2/S1	85	5	1190,686	648,28	771897,9201	0,0021
	Bulb Plat	S2	B1/SB-F/TF/Fr16/Ps/SS2/S2	85	5	1198,121	648,28	776717,8819	0,0021
	Bulb Plat	S3	B1/SB-F/TF/Fr16/Ps/SS2/S3	85	5	1203,746	648,28	780364,4569	0,0021
	Plate	WP	B1/SB-F/TF/Fr16/Sb/SS3/WP	-	6	-	1715048,76	10290292,56	0,0280
B	Sub Block Transversal Bulkhead	S-TB/				B1/S-TB/			
	B.1 Transverse Bulkhead Fr 13	Fr13/				B1/S-TB/Fr13/			
		P/				B1/S-TB/Fr13/P/			
	B.1.1								
		1	B1/S-TB/Fr13/P/1	-	8	-	6340079,58	50720636,64	0,1381
		2	B1/S-TB/Fr13/P/2	-	8	-	1486687,34	11893498,72	0,0324
		3	B1/S-TB/Fr13/P/3	-	5	-	4762782,55	23813912,75	0,0648
		4	B1/S-TB/Fr13/P/4	-	5	-	8946574,56	44732872,8	0,1218
		5	B1/S-TB/Fr13/P/5	-	5	-	3423543,28	17117716,4	0,0466
		Sf/				B1/S-TB/Fr13/Sf/			
		FB1	B1/S-TB/Fr13/Sf/FB1	90	8	3412,342	720	2456886,24	0,0067
		FB2	B1/S-TB/Fr13/Sf/FB2	110	8	1172,979	880	1032221,52	0,0028
		FB3	B1/S-TB/Fr13/Sf/FB3	90	8	3412,342	720	2456886,24	0,0067
		FB4	B1/S-TB/Fr13/Sf/FB4	80	8	1189	640	760960	0,0021
		FB5	B1/S-TB/Fr13/Sf/FB5	80	8	1189	640	760960	0,0021
		FB6	B1/S-TB/Fr13/Sf/FB6	80	5	300	400	120000	0,0003
		FB7	B1/S-TB/Fr13/Sf/FB7	80	5	300	400	120000	0,0003
		FB8	B1/S-TB/Fr13/Sf/FB8	80	5	300	400	120000	0,0003
		FB9	B1/S-TB/Fr13/Sf/FB9	80	5	300	400	120000	0,0003
		FB10	B1/S-TB/Fr13/Sf/FB10	80	5	600	400	240000	0,0007
		FB11	B1/S-TB/Fr13/Sf/FB11	80	5	900	400	360000	0,0010
		Bp1	B1/S-TB/Fr13/Sf/Bp1	85	5	1221,423	648,28	791824,1024	0,0022
		Bp2	B1/S-TB/Fr13/Sf/Bp2	85	5	1304,039	648,28	845382,4029	0,0023
		Bp3	B1/S-TB/Fr13/Sf/Bp3	85	5	378,753	648,28	245537,9948	0,0007
		Bp4	B1/S-TB/Fr13/Sf/Bp4	85	5	459,861	648,28	298118,6891	0,0008
		Bp5	B1/S-TB/Fr13/Sf/Bp5	85	5	535,055	648,28	346865,4554	0,0009
		Bp6	B1/S-TB/Fr13/Sf/Bp6	85	5	632	648,28	409712,96	0,0011
		Bp7	B1/S-TB/Fr13/Sf/Bp7	85	5	717	648,28	464816,76	0,0013
		Bp8	B1/S-TB/Fr13/Sf/Bp8	85	5	717	648,28	464816,76	0,0013
		Bp9	B1/S-TB/Fr13/Sf/Bp9	85	5	717	648,28	464816,76	0,0013
		Bp10	B1/S-TB/Fr13/Sf/Bp10	85	5	717	648,28	464816,76	0,0013
		Bp11	B1/S-TB/Fr13/Sf/Bp11	85	5	632	648,28	409712,96	0,0011
		Bp12	B1/S-TB/Fr13/Sf/Bp12	85	5	601,408	648,28	389880,7782	0,0011
		Bp13	B1/S-TB/Fr13/Sf/Bp13	85	5	535,055	648,28	346865,4554	0,0009
		Bp14	B1/S-TB/Fr13/Sf/Bp14	85	5	459,861	648,28	298118,6891	0,0008
		Bp15	B1/S-TB/Fr13/Sf/Bp15	85	5	1304,039	648,28	845382,4029	0,0023
		Bp16	B1/S-TB/Fr13/Sf/Bp16	85	5	1221,423	648,28	791824,1024	0,0022
		Bp17	B1/S-TB/Fr13/Sf/Bp17	85	5	1189,063	648,28	770845,7616	0,0021
		Bp18	B1/S-TB/Fr13/Sf/Bp18	85	5	1193,01	648,28	773404,5228	0,0021
		Bp19	B1/S-TB/Fr13/Sf/Bp19	85	5	1198,525	648,28	776979,787	0,0021
		Bp20	B1/S-TB/Fr13/Sf/Bp20	85	5	1204,04	648,28	780555,0512	0,0021
		Bp21	B1/S-TB/Fr13/Sf/Bp21	85	5	2292	648,28	1485857,76	0,0040
		Bp22	B1/S-TB/Fr13/Sf/Bp22	85	5	2292	648,28	1485857,76	0,0040
		Bp23	B1/S-TB/Fr13/Sf/Bp23	85	5	2298	648,28	1489747,44	0,0041
		Bp24	B1/S-TB/Fr13/Sf/Bp24	85	5	2303,613	648,28	1493386,236	0,0041
		Bp25	B1/S-TB/Fr13/Sf/Bp25	85	5	1992,5	648,28	1291697,9	0,0035
		Bp26	B1/S-TB/Fr13/Sf/Bp26	85	5	2317,749	648,28	1502550,322	0,0041
		Bp27	B1/S-TB/Fr13/Sf/Bp27	85	5	2211	648,28	1433347,08	0,0039
		Bp28	B1/S-TB/Fr13/Sf/Bp28	85	5	1787	648,28	1158476,36	0,0032
		Bp29	B1/S-TB/Fr13/Sf/Bp29	85	5	2334,94	648,28	1513694,903	0,0041
		Bp30	B1/S-TB/Fr13/Sf/Bp30	85	5	1992,5	648,28	1291697,9	0,0035
		Bp31	B1/S-TB/Fr13/Sf/Bp31	85	5	2303,613	648,28	1493386,236	0,0041
		Bp32	B1/S-TB/Fr13/Sf/Bp32	85	5	2298	648,28	1489747,44	0,0041
		Bp33	B1/S-TB/Fr13/Sf/Bp33	85	5	2287	648,28	1482616,36	0,0040
		Bp34	B1/S-TB/Fr13/Sf/Bp34	85	5	2292	648,28	1485857,76	0,0040



No	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
		Bp35	B1/S-TB/Fr13/Sf/Bp35	85	5	1204.04	648,28	780555,0512	0,0021	
		Bp36	B1/S-TB/Fr13/Sf/Bp36	85	5	1198,525	648,28	776979,787	0,0021	
		Bp37	B1/S-TB/Fr13/Sf/Bp37	85	5	1193,01	648,28	773404,5228	0,0021	
		Bp38	B1/S-TB/Fr13/Sf/Bp38	85	5	1189,063	648,28	770845,7616	0,0021	
17		Fr17/ P/				B1/S-TB/Fr17/ B1/S-TB/Fr17/P/				
B.1.1	Bulkhead Plate	Plate	1	B1/S-TB/Fr17/P/1	-	5	-	1047416,47	5237082,35	0,0143
			2	B1/S-TB/Fr17/P/2	-	5	-	8402017,52	42010087,6	0,1144
			3	B1/S-TB/Fr17/P/3	-	5	-	2257012,39	11285061,95	0,0307
			4	B1/S-TB/Fr17/P/4	-	5	-	8854903,92	44274519,6	0,1206
			5	B1/S-TB/Fr17/P/5	-	5	-	3492728,12	17463640,6	0,0476
B.1.2	Stiffener Bulkhead	Sf/				B1/S-TB/Fr17/Sf/				
1	Plat Bar	Plate Bar	FB1	B1/S-TB/Fr17/Sf/FB1	110	8	11766,093	880	10354161,84	0,0282
			FB2	B1/S-TB/Fr17/Sf/FB2	94	5	300	470	141000	0,0004
			FB3	B1/S-TB/Fr17/Sf/FB3	94	5	300	470	141000	0,0004
			FB4	B1/S-TB/Fr17/Sf/FB4	95	8	1200	760	912000	0,0025
2	Stiffener T	T Bar	Tb1	B1/S-TB/Fr17/Sf/Tb1	100 x 65	6	2367,626	954	2258715,204	0,0062
			Tb2	B1/S-TB/Fr17/Sf/Tb2	100 x 65	6	2480,601	954	2366493,354	0,0064
			Tb3	B1/S-TB/Fr17/Sf/Tb3	100 x 65	6	2589,042	954	2469946,068	0,0067
			Tb4	B1/S-TB/Fr17/Sf/Tb4	100 x 65	6	2700,533	954	2576308,482	0,0070
			Tb5	B1/S-TB/Fr17/Sf/Tb5	100 x 65	6	2809,879	954	2680624,566	0,0073
			Tb6	B1/S-TB/Fr17/Sf/Tb6	100 x 65	6	2939,066	954	2803868,964	0,0076
			Tb7	B1/S-TB/Fr17/Sf/Tb7	100 x 65	6	3048,667	954	2908428,318	0,0079
			Tb8	B1/S-TB/Fr17/Sf/Tb8	101 x 65	6	3089,724	954	2947596,696	0,0080
			Tb9	B1/S-TB/Fr17/Sf/Tb9	102 x 65	6	2254,202	954	2150508,708	0,0059
			Tb10	B1/S-TB/Fr17/Sf/Tb10	101 x 65	6	3089,724	954	2947596,696	0,0080
			Tb11	B1/S-TB/Fr17/Sf/Tb11	102 x 65	6	2254,202	954	2150508,708	0,0059
			Tb12	B1/S-TB/Fr17/Sf/Tb12	100 x 65	6	2367,626	954	2258715,204	0,0062
			Tb13	B1/S-TB/Fr17/Sf/Tb13	100 x 65	6	2480,601	954	2366493,354	0,0064
			Tb14	B1/S-TB/Fr17/Sf/Tb14	100 x 65	6	2589,042	954	2469946,068	0,0067
			Tb15	B1/S-TB/Fr17/Sf/Tb15	100 x 65	6	2700,533	954	2576308,482	0,0070
			Tb16	B1/S-TB/Fr17/Sf/Tb16	100 x 65	6	2809,879	954	2680624,566	0,0073
			Tb17	B1/S-TB/Fr17/Sf/Tb17	100 x 65	6	2939,066	954	2803868,964	0,0076
			Tb18	B1/S-TB/Fr17/Sf/Tb18	100 x 65	6	3048,667	954	2908428,318	0,0079
3	Stiffener Bulb Plat	Bulb Plat	Bp1	B1/S-TB/Fr17/Sf/Bp1	85	5	1189,063	648,28	770845,7616	0,0021
			Bp2	B1/S-TB/Fr17/Sf/Bp2	85	5	716,255	648,28	464333,7914	0,0013
			Bp3	B1/S-TB/Fr17/Sf/Bp3	85	5	716,255	648,28	464333,7914	0,0013
			Bp4	B1/S-TB/Fr17/Sf/Bp4	85	5	716,255	648,28	464333,7914	0,0013
			Bp5	B1/S-TB/Fr17/Sf/Bp5	85	5	1189,063	648,28	770845,7616	0,0021
C.	Sub Block Deck	SB-D/ LDG/				B1/SB-D/ B1/SB-D/LDG/ B1/SB-D/LDG/C/				
	C.1 Long Deck Girder	C/								
C.1.1	Long Deck Girder Centerline	Bulb Plat	1	B1/SB-D/LDG/C/1	85	5	1200	648,28	777936	0,0021
			2	B1/SB-D/LDG/C/2	85	5	1200	648,28	777936	0,0021
			3	B1/SB-D/LDG/C/3	85	5	1200	648,28	777936	0,0021
			4	B1/SB-D/LDG/C/4	85	5	1200	648,28	777936	0,0021
			5	B1/SB-D/LDG/C/5	85	5	1200	648,28	777936	0,0021
			6	B1/SB-D/LDG/C/6	85	5	1200	648,28	777936	0,0021
			7	B1/SB-D/LDG/C/7	85	5	1200	648,28	777936	0,0021
			8	B1/SB-D/LDG/C/8	85	5	1200	648,28	777936	0,0021
			9	B1/SB-D/LDG/C/9	85	5	1200	648,28	777936	0,0021
			10	B1/SB-D/LDG/C/10	85	5	1200	648,28	777936	0,0021
			11	B1/SB-D/LDG/C/11	85	5	1200	648,28	777936	0,0021
			12	B1/SB-D/LDG/C/12	85	5	1200	648,28	777936	0,0021
			13	B1/SB-D/LDG/C/13	85	5	1200	648,28	777936	0,0021
			14	B1/SB-D/LDG/C/14	85	5	1200	648,28	777936	0,0021
C.1.2	Long Deck Girder Portside	Bulb Plat	1	B1/SB-D/LDG/Ps/1	85	5	4800	648,28	3111744	0,0085
			2	B1/SB-D/LDG/Ps/2	85	5	4800	648,28	3111744	0,0085
			3	B1/SB-D/LDG/Ps/3	85	5	4800	648,28	3111744	0,0085
			4	B1/SB-D/LDG/Ps/4	85	5	4800	648,28	3111744	0,0085
			5	B1/SB-D/LDG/Ps/5	85	5	4800	648,28	3111744	0,0085
			6	B1/SB-D/LDG/Ps/6	85	5	4800	648,28	3111744	0,0085



No	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)								
				Breath (mm)	Thickness (mm)												
D.1.2	Plat Bar	Plate	FB1	B1/SB-LC/B/Ps/SA1/FB1	-	8	-	1165377.99	9323023.92	0.0254							
			FB2	B1/SB-LC/B/Ps/SA1/FB2	-	15	-	4793496.4	71902446	0.1958							
	Stiffener	Plate	S1	B1/SB-LC/B/Ps/SA1/S1	80	8	1059,787	640	678263.68	0.0018							
			S2	B1/SB-LC/B/Ps/SA1/S2	80	8	4472,451	640	2862368.64	0.0078							
			S3	B1/SB-LC/B/Ps/SA1/S3	80	8	3591,217	640	2298378.88	0.0063							
			S4	B1/SB-LC/B/Ps/SA1/S4	80	8	4469,414	640	2860424.96	0.0078							
D.1.2	Plat Bar	Plate Bar	FB1	B1/SB-LC/B/Ps/SA2/FB1	-	8	-	207639.05	1661112.4	0.0045							
			FB2	B1/SB-LC/B/Ps/SA2/FB2	-	15	-	4077983.71	61169755.65	0.1666							
	Stiffener	Plate Bar	S1	B1/SB-LC/B/Ps/SA2/S1	80	8	3570	640	2284800	0.0062							
			S2	B1/SB-LC/B/Ps/SA2/S2	80	8	3570	640	2284800	0.0062							
			S3	B1/SB-LC/B/Ps/SA2/S3	80	8	3570	640	2284800	0.0062							
			S4	B1/SB-LC/B/Ps/SA2/S4	80	8	1170	640	748800	0.0020							
			S5	B1/SB-LC/B/Ps/SA2/S5	80	8	1170	640	748800	0.0020							
			S6	B1/SB-LC/B/Ps/SA2/S6	80	8	1170	640	748800	0.0020							
	2	Long Bottom Section B2	SB2/														
	a.	Plat Bar	Plate Bar	FB1	B1/SB-LC/B/Ps/SB2/FB1	-	8	-	2375605.81	19004846.48	0.0518						
				FB2	B1/SB-LC/B/Ps/SB2/FB2	-	5	-	353652.257	1768261.285	0.0048						
	b.	Stiffener	Plate Bar	S1	B1/SB-LC/B/Ps/SB2/S1	90	10	3545,962	900	3191365.8	0.0087						
S2				B1/SB-LC/B/Ps/SB2/S2	90	10	631.79	900	568611	0.0015							
S3				B1/SB-LC/B/Ps/SB2/S3	80	10	451.77	800	361416	0.0010							
S4				B1/SB-LC/B/Ps/SB2/S4	80	10	451.77	800	361416	0.0010							
S5				B1/SB-LC/B/Ps/SB2/S5	80	8	1086,599	640	695423.36	0.0019							
D.1.3	Starboard	Sb/															
1	Long Bottom Section B1	SB1/															
a.	Plat Bar	Plate	FB1	B1/SB-LC/B/Sb/SB1/FB1	-	8	-	1165377.99	9323023.92	0.0254							
			FB2	B1/SB-LC/B/Sb/SB1/FB2	-	15	-	4793496.4	71902446	0.1958							
b.	Stiffener	Plate	S1	B1/SB-LC/B/Sb/SB1/S1	80	8	1195,011	640	764807.04	0.0021							
			S2	B1/SB-LC/B/Sb/SB1/S2	80	8	1195,011	640	764807.04	0.0021							
			S3	B1/SB-LC/B/Sb/SB1/S3	80	8	1195,011	640	764807.04	0.0021							
			S4	B1/SB-LC/B/Sb/SB1/S4	80	8	3570,237	640	2284951.68	0.0062							
			S5	B1/SB-LC/B/Sb/SB1/S5	80	8	3545	640	2268800	0.0062							
			S6	B1/SB-LC/B/Sb/SB1/S6	80	8	3545	640	2268800	0.0062							
2	Long Bottom Section A2	SA2/															
a.	Plat Bar	Plate Bar	FB1	B1/SB-LC/B/Sb/SA2/FB1	-	8	-	207639.05	1661112.4	0.0045							
			FB2	B1/SB-LC/B/Sb/SA2/FB2	-	15	-	4077983.71	61169755.65	0.1666							
b.	Stiffener	Plate Bar	S1	B1/SB-LC/B/Sb/SA2/S1	80	8	3570	640	2284800	0.0062							
			S2	B1/SB-LC/B/Sb/SA2/S2	80	8	3570	640	2284800	0.0062							
			S3	B1/SB-LC/B/Sb/SA2/S3	80	8	3570	640	2284800	0.0062							
			S4	B1/SB-LC/B/Sb/SA2/S4	80	8	1170	640	748800	0.0020							
			S5	B1/SB-LC/B/Sb/SA2/S5	80	8	1170	640	748800	0.0020							
			S6	B1/SB-LC/B/Sb/SA2/S6	80	8	1170	640	748800	0.0020							
3	Long Bottom Section B2	SB2/															
a.	Plat Bar	Plate Bar	FB1	B1/SB-LC/B/Sb/SB2/FB1	-	8	-	2375605.81	19004846.48	0.0518							
			FB2	B1/SB-LC/B/Sb/SB2/FB2	-	5	-	353652.257	1768261.285	0.0048							
b.	Stiffener	Plate Bar	S1	B1/SB-LC/B/Sb/SB2/S1	90	10	3545,962	900	3191365.8	0.0087							
			S2	B1/SB-LC/B/Sb/SB2/S2	90	10	631.79	900	568611	0.0015							
			S3	B1/SB-LC/B/Sb/SB2/S3	80	10	451.77	800	361416	0.0010							
			S4	B1/SB-LC/B/Sb/SB2/S4	80	10	451.77	800	361416	0.0010							
			S5	B1/SB-LC/B/Sb/SB2/S5	80	8	1086,599	640	695423.36	0.0019							
D.2	Longitudinal Tank Top Construction	TT/															
D.2.1	1	Section A-1	Portside	SA-1/	TT/	Ps/	SA-1/	B1/SB-LC/TT/									
								B1/SB-LC/TT/Ps/									
								B1/SB-LC/TT/Ps/SA-1/									
	2	Section A-2	Starboard	SA-2/	TT/	Ps/	SA-2/	B1/SB-LC/TT/Ps/SA-2/									
								B1/SB-LC/TT/Ps/									
								B1/SB-LC/TT/Ps/SA-2/									
	D.2.2	1	Section A-1	Starboard	SA-1/	TT/	Sb/	SA-1/	B1/SB-LC/TT/Sb/								
									B1/SB-LC/TT/Sb/SA-1/								
									Plat Bar	WP1	B1/SB-LC/TT/Sb/SA-1/WP1	180	8	-	415757.406	3326059.248	0.0091
										FP1	B1/SB-LC/TT/Sb/SA-1/FP1	100	10	2120.974	1000	2120974	0.0058
Pillar	Pi	B1/SB-LC/TT/Sb/SA-1/Pi	127	6.35	2030.5	3064.51	6222487.555	0.0169									
									B1/SB-LC/TT/Sb/SA-2/								



No	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)										
				Breath (mm)	Thickness (mm)														
Section A-2	Plate Bar	WP1	B1/SB-LC/TT/Sb/SA-2/WP1	180	8	-	415757,406	3326059,248	0,0091										
		FP1	B1/SB-LC/TT/Sb/SA-2/FP1	100	10	2120,974	1000	2120974	0,0058										
	Pillar	Pi	B1/SB-LC/TT/Sb/SA-2/Pi	127	6,35	2030,5	3064,51	6222487,555	0,0169										
Inclusion		D/				B1/SB-LC/D/													
		Ps/				B1/SB-LC/D/Ps/													
a.	Deck	Plate Bar	WP	B1/SB-LC/D/Ps/WP	-	8	-	1796050,838	14368406,7	0,0391									
			FP	B1/SB-LC/D/Ps/FP	150	12	4785,206	1800	8613370,8	0,0235									
			P	B1/SB-LC/D/Ps/P	45	8	2400	360	864000	0,0024									
			TrB1	B1/SB-LC/D/Ps/TrB1	45	8	159,711	360	57495,96	0,0002									
			TrB2	B1/SB-LC/D/Ps/TrB2	45	8	159,711	360	57495,96	0,0002									
			TrB3	B1/SB-LC/D/Ps/TrB3	45	8	159,711	360	57495,96	0,0002									
			TrB4	B1/SB-LC/D/Ps/TrB4	45	8	159,711	360	57495,96	0,0002									
			TrB5	B1/SB-LC/D/Ps/TrB5	45	8	159,711	360	57495,96	0,0002									
			TrB6	B1/SB-LC/D/Ps/TrB6	45	8	159,711	360	57495,96	0,0002									
			TrB7	B1/SB-LC/D/Ps/TrB7	45	8	159,711	360	57495,96	0,0002									
D.3.2	b.	Deck	Plate Bar	WP	B1/SB-LC/D/Sb/WP	-	8	-	1796050,838	14368406,7	0,0391								
				FP	B1/SB-LC/D/Sb/FP	150	12	4785,206	1800	8613370,8	0,0235								
				TrB1	B1/SB-LC/D/Sb/TrB1	45	8	159,711	360	57495,96	0,0002								
				TrB2	B1/SB-LC/D/Sb/TrB2	45	8	159,711	360	57495,96	0,0002								
				TrB3	B1/SB-LC/D/Sb/TrB3	45	8	159,711	360	57495,96	0,0002								
				TrB4	B1/SB-LC/D/Sb/TrB4	45	8	159,711	360	57495,96	0,0002								
				TrB5	B1/SB-LC/D/Sb/TrB5	45	8	159,711	360	57495,96	0,0002								
				TrB6	B1/SB-LC/D/Sb/TrB6	45	8	159,711	360	57495,96	0,0002								
				TrB7	B1/SB-LC/D/Sb/TrB7	45	8	159,711	360	57495,96	0,0002								
				D.4	Longitudinal Bulkhead Wing Tank	Portside	Plate Bar	FB1	B1/SB-LC/Bkh/PS/1	-	5	-	4624219,79	23121098,95	0,0630				
FB2	B1/SB-LC/Bkh/PS/2	-	5					-	3464450,13	17322250,65	0,0472								
S1	B1/SB-LC/Bkh/PS/S1	85	5					3594	648,28	2329918,32	0,0063								
S2	B1/SB-LC/Bkh/PS/S2	85	5					3594	648,28	2329918,32	0,0063								
S3	B1/SB-LC/Bkh/PS/S3	85	5					3594	648,28	2329918,32	0,0063								
S4	B1/SB-LC/Bkh/PS/S4	85	5					3594	648,28	2329918,32	0,0063								
S5	B1/SB-LC/Bkh/PS/S5	85	5					2548,66	648,28	1652245,305	0,0045								
S6	B1/SB-LC/Bkh/PS/S6	85	5					539,45	648,28	349714,646	0,0010								
S7	B1/SB-LC/Bkh/PS/S7	85	5					539,45	648,28	349714,646	0,0010								
S8	B1/SB-LC/Bkh/PS/S8	85	5					3594	648,28	2329918,32	0,0063								
D.4.1	Wing Tank Bulkhead	Stiffener	S9	S9	B1/SB-LC/Bkh/PS/S9	85	5	3594	648,28	2329918,32	0,0063								
				Starboard	Plate Bar	FB1	B1/SB-LC/Bkh/Sb/1	-	5	-	4624219,79	23121098,95	0,0630						
						FB2	B1/SB-LC/Bkh/Sb/2	-	5	-	3464450,13	17322250,65	0,0472						
						S1	B1/SB-LC/Bkh/Sb/S1	85	5	3594	648,28	2329918,32	0,0063						
						S2	B1/SB-LC/Bkh/Sb/S2	85	5	3594	648,28	2329918,32	0,0063						
						S3	B1/SB-LC/Bkh/Sb/S3	85	5	3594	648,28	2329918,32	0,0063						
						S4	B1/SB-LC/Bkh/Sb/S4	85	5	3594	648,28	2329918,32	0,0063						
						S5	B1/SB-LC/Bkh/Sb/S5	85	5	2548,66	648,28	1652245,305	0,0045						
						S6	B1/SB-LC/Bkh/Sb/S6	85	5	539,45	648,28	349714,646	0,0010						
						S7	B1/SB-LC/Bkh/Sb/S7	85	5	539,45	648,28	349714,646	0,0010						
S8	B1/SB-LC/Bkh/Sb/S8	85	5			3594	648,28	2329918,32	0,0063										
D.4.2	Wing Tank Bulkhead	Stiffener	S9	S9	B1/SB-LC/Bkh/Sb/S9	85	5	3594	648,28	2329918,32	0,0063								
				D.5	Tank Top Wing Tank	Portside	Plate Bar	FB1	B1/SB-LC/TT/WgT/PS/1	-	5	-	4696236,22	23481181,1	0,0639				
								S1	B1/SB-LC/TT/WgT/PS/S1	85	5	3600	648,28	2333808	0,0064				
								S2	B1/SB-LC/TT/WgT/PS/S2	85	5	3600	648,28	2333808	0,0064				
								S3	B1/SB-LC/TT/WgT/PS/S3	85	5	3600	648,28	2333808	0,0064				
								S4	B1/SB-LC/TT/WgT/PS/S4	85	5	3600	648,28	2333808	0,0064				
								D.5.1	Wing Tank Bulkhead	Stiffener	S1	S1	B1/SB-LC/TT/WgT/Sb/1	-	5	-	4696236,22	23481181,1	0,0639
												S1	B1/SB-LC/TT/WgT/Sb/S1	85	5	3600	648,28	2333808	0,0064



No	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)						
				Breath (mm)	Thickness (mm)										
1	Tank Bulkhead	Stiffener	S2	B1/SB-LC/TT/WgT/Sb/S2	85	5	3600	648,28	2333808	0,0064					
			S3	B1/SB-LC/TT/WgT/Sb/S3	85	5	3600	648,28	2333808	0,0064					
			S4	B1/SB-LC/TT/WgT/Sb/S4	85	5	3600	648,28	2333808	0,0064					
			SB-B/		B1/SB-B/										
		TT/S/		B1/SB-B/TT/S/											
E.1	Inner Bottom (Tank Top Stiffener)	Plate Bar	1	B1/SB-B/TT/S/1	100	8	3595	800	2876000	0,0078					
			2	B1/SB-B/TT/S/2	100	8	3595	800	2876000	0,0078					
			3	B1/SB-B/TT/S/3	100	8	1985	800	1588000	0,0043					
			4	B1/SB-B/TT/S/4	100	8	3595	800	2876000	0,0078					
			5	B1/SB-B/TT/S/5	100	8	3595	800	2876000	0,0078					
			6	B1/SB-B/TT/S/6	100	8	1985	800	1588000	0,0043					
			7	B1/SB-B/TT/S/7	100	8	3595	800	2876000	0,0078					
			8	B1/SB-B/TT/S/8	100	8	3595	800	2876000	0,0078					
E.2	Inner Bottom Plat (Tank Top Plat)	TT/P/		B1/SB-B/TT/P/											
		C/		B1/SB-B/TT/P/C/											
E.2.1	1	Plat Tank Top	Plate Bar	Centerline	FB1	B1/SB-B/TT/P/C/	FB1	-	8	-	2132817,06	17062536,48	0,0465		
				FB2	B1/SB-B/TT/P/C/	FB2	-	30	-	1253210,2	37596306	0,1024			
				FB3	B1/SB-B/TT/P/C/	FB3	-	50	-	764234,073	38211703,65	0,1041			
				FB4	B1/SB-B/TT/P/C/	FB4	-	50	-	972734,07	48636703,5	0,1324			
				FB5	B1/SB-B/TT/P/C/	FB5	120	15	572,5	1800	1030500	0,0028			
				FB6	B1/SB-B/TT/P/C/	FB6	120	15	572,5	1800	1030500	0,0028			
				FB7	B1/SB-B/TT/P/C/	FB7	-	50	-	607015,6	30350780	0,0826			
				FB8	B1/SB-B/TT/P/C/	FB8	-	50	-	815515,6	40775780	0,1110			
				FB9	B1/SB-B/TT/P/C/	FB9	120	15	765	1800	1377000	0,0037			
				FB10	B1/SB-B/TT/P/C/	FB10	120	15	765	1800	1377000	0,0037			
				FB11	B1/SB-B/TT/P/C/	FB11	-	10	-	771651,02	7716510,2	0,0210			
				FB12	B1/SB-B/TT/P/C/	FB12	120	15	765	1800	1377000	0,0037			
				FB13	B1/SB-B/TT/P/C/	FB13	120	15	765	1800	1377000	0,0037			
				2	Stiffener	Plate Bar	S1	B1/SB-B/TT/P/C/	S1	75	8	690,41	600	414246	0,0011
S2	B1/SB-B/TT/P/C/	S2	75				8	690,41	600	414246	0,0011				
S3	B1/SB-B/TT/P/C/	S3	80				10	1015	800	812000	0,0022				
S4	B1/SB-B/TT/P/C/	S4	80				10	1015	800	812000	0,0022				
E.2.1	Portside	Ps/		B1/SB-B/TT/P/Ps/											
		SA/		B1/SB-B/TT/P/Ps/SA/											
E.2.2	1	Plat Tank Top	Plate Bar	FB1	B1/SB-B/TT/P/Ps/SA/	FB1	-	8	-	2601250	20810000	0,0567			
				FB2	B1/SB-B/TT/P/Ps/SA/	FB2	-	30	-	252600	7578000	0,0206			
				FB3	B1/SB-B/TT/P/Ps/SA/	FB3	-	15	-	1013145,01	15197175,15	0,0414			
				FB4	B1/SB-B/TT/P/Ps/SA/	FB4	-	30	-	471688,05	14150641,5	0,0385			
				FB5	B1/SB-B/TT/P/Ps/SA/	FB5	-	30	-	252586,38	7577591,4	0,0206			
2	Stiffener	Plate Bar	S1	B1/SB-B/TT/P/Ps/SA/	S1	75	8	690,41	600	414246	0,0011				
			S2	B1/SB-B/TT/P/Ps/SA/	S2	75	8	690,41	600	414246	0,0011				
E.2.2	Section B	Plate Bar	SB/		B1/SB-B/TT/P/Ps/SB/										
			FB1	B1/SB-B/TT/P/Ps/SB/	FB1	-	12	-	215035	2580420	0,0070				
			FB2	B1/SB-B/TT/P/Ps/SB/	FB2	-	15	-	397814,51	5967217,65	0,0162				
			FB3	B1/SB-B/TT/P/Ps/SB/	FB3	-	15	-	355463,46	5331951,9	0,0145				
E.2.2	Section B	Plate Bar	FB4	B1/SB-B/TT/P/Ps/SB/	FB4	80	8	-	72900,28	583202,24	0,0016				
			Sb/		B1/SB-B/TT/P/Sb/										
			SA/		B1/SB-B/TT/P/Sb/SA/										
E.2.3	1	Plat Tank Top	Plate Bar	FB1	B1/SB-B/TT/P/Sb/SA/	FB1	-	8	-	2601250	20810000	0,0567			
				FB2	B1/SB-B/TT/P/Sb/SA/	FB2	-	30	-	252600	7578000	0,0206			
				FB3	B1/SB-B/TT/P/Sb/SA/	FB3	-	15	-	1013145,01	15197175,15	0,0414			
				FB4	B1/SB-B/TT/P/Sb/SA/	FB4	-	30	-	471688,05	14150641,5	0,0385			
				FB5	B1/SB-B/TT/P/Sb/SA/	FB5	-	30	-	252586,38	7577591,4	0,0206			
				2	Stiffener	Plate Bar	S1	B1/SB-B/TT/P/Sb/SA/	S1	75	8	690,41	600	414246	0,0011
							S2	B1/SB-B/TT/P/Sb/SA/	S2	75	8	690,41	600	414246	0,0011
	E.3.2	Section B	Plate Bar	SB/		B1/SB-B/TT/P/Sb/SB/									
				FB1	B1/SB-B/TT/P/Sb/SB/	FB1	-	12	-	215035	2580420	0,0070			
				FB2	B1/SB-B/TT/P/Sb/SB/	FB2	-	15	-	397814,51	5967217,65	0,0162			
				FB3	B1/SB-B/TT/P/Sb/SB/	FB3	-	15	-	355463,46	5331951,9	0,0145			
				FB4	B1/SB-B/TT/P/Sb/SB/	FB4	80	8	-	72900,28	583202,24	0,0016			
				SB-SS/		B1/SB-SS/									
				Plat											



na	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)
				Breath (mm)	Thickness (mm)				
		B/ Ps/				B1/SB-SS/B/ B1/SB-SS/B/Ps/			
te 1	Plate	1	B1/SB-SS/B/Ps/1	-	12	-	158277,3583	1899328,3	0,0052
te 2	Plate	2	B1/SB-SS/B/Ps/2	-	8	-	6129749,25	49037994	0,1335
te 3	Plate	3	B1/SB-SS/B/Ps/3	-	12	-	188224,54	2258694,48	0,0062
te 4	Plate	4	B1/SB-SS/B/Ps/4	-	8	-	10725610,63	85804885	0,2336
te 5	Plate	5	B1/SB-SS/B/Ps/5	-	12	-	144391,5633	1732698,76	0,0047
te 6	Plate	6	B1/SB-SS/B/Ps/6	-	8	-	5483802,325	43870418,6	0,1195
		Sb/				B1/SB-SS/B/Sb/			
	1 Bottom Plate 1	Plate	B1/SB-SS/B/Sb/1	-	12	-	158277,3583	1899328,3	0,0052
	2 Bottom Plate 2	Plate	B1/SB-SS/B/Sb/2	-	8	-	6129749,25	49037994	0,1335
	3 Bottom Plate 3	Plate	B1/SB-SS/B/Sb/3	-	12	-	188224,54	2258694,48	0,0062
	4 Bottom Plate 4	Plate	B1/SB-SS/B/Sb/4	-	8	-	10725610,63	85804885	0,2336
	5 Bottom Plate 5	Plate	B1/SB-SS/B/Sb/5	-	12	-	144391,5633	1732698,76	0,0047
	6 Bottom Plate 6	Plate	B1/SB-SS/B/Sb/6	-	8	-	5483802,325	43870418,6	0,1195
	Side Shell Plate	S/ Ps/				B1/SB-SS/S/ B1/SB-SS/S/Ps/			
	1 Side Shell Plate 1	Plate	B1/SB-SS/S/Ps/1	-	6	-	1642289,963	9853739,78	0,0268
	2 Side Shell Plate 2	Plate	B1/SB-SS/S/Ps/2	-	6	-	426958,5017	2561751,01	0,0070
	3 Side Shell Plate 3	Plate	B1/SB-SS/S/Ps/3	-	6	-	9397684,033	56386104,2	0,1535
	4 Side Shell Plate 4	Plate	B1/SB-SS/S/Ps/4	-	6	-	4236851,767	25421110,6	0,0692
	Starboard	Sb/				B1/SB-SS/S/Sb/			
	1 Side Shell Plate 1	Plate	B1/SB-SS/S/Sb/1	-	6	-	1642289,963	9853739,78	0,0268
	2 Side Shell Plate 2	Plate	B1/SB-SS/S/Sb/2	-	6	-	426958,5017	2561751,01	0,0070
	3 Side Shell Plate 3	Plate	B1/SB-SS/S/Sb/3	-	6	-	9397684,033	56386104,2	0,1535
	4 Side Shell Plate 4	Plate	B1/SB-SS/S/Sb/4	-	6	-	4236851,767	25421110,6	0,0692



		TT/SB/ Ps/	B1/TT/SB/ B1/TT/SB/Ps/							
Material	Sub Code	Kode		Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
Plate	Bracket/	B1/TT/SB/Ps/Bracket/1		-	5	676,293		208950,977	0,0006	
Plate	Bracket/	B1/TT/SB/Ps/Bracket/2		-	5	577,909		176415,606	0,0005	
Plate	Bracket/	B1/TT/SB/Ps/Bracket/3		-	5	377,733		109430,9	0,0003	
Sb/	B1/TT/SB/Sb/									
Material	Sub Code	Kode		Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
Plate	Bracket/	B1/TT/SB/Sb/Bracket/1		-	5	676,293		208950,977	0,0006	
Plate	Bracket/	B1/TT/SB/Sb/Bracket/2		-	5	577,909		176415,606	0,0005	
Plate	Bracket/	B1/TT/SB/Sb/Bracket/3		-	5	377,733		109430,9	0,0003	
Long Bulkhead Wing Tank Transverse Frame 1		LBkh/TF16/ Ps/	B1/LBkh/TF16/ B1/LBkh/TF16/Ps/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/LBkh/TF16/Ps/Bracket/1	-	5	385,5		111745,11	0,0003
2	Bracket	Plate	Bracket/	B1/LBkh/TF16/Ps/Bracket/2	-	5	385,5		111745,11	0,0003
3	Bracket	Plate	Bracket/	B1/LBkh/TF16/Ps/Bracket/3	-	5	385,5		111745,11	0,0003
Starboard		Sb/	B1/LBkh/TF16/Sb/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/LBkh/TF16/Sb/Bracket/1	-	5	385,5		111745,11	0,0003
2	Bracket	Plate	Bracket/	B1/LBkh/TF16/Sb/Bracket/2	-	5	385,5		111745,11	0,0003
3	Bracket	Plate	Bracket/	B1/LBkh/TF16/Sb/Bracket/3	-	5	385,5		111745,11	0,0003
Tank Top Wing Tank Transverse Frame 16 Port		TTWT/TF16/ Ps/	B1/TTWT/TF16/ B1/LBkh/TF16/Ps/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/TTWT/TF16/Bracket/1	-	5	300		65313,6499	0,0002
2	Bracket	Plate	Bracket/	B1/TTWT/TF16/Bracket/2	-	5	300		65313,6499	0,0002
3	Bracket	Plate	Bracket/	B1/TTWT/TF16/Bracket/3	-	5	300		65313,6499	0,0002
Main Deck Plat Long Deck Beam Centerline			B1/MP/LC/DB/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/1	-	5	328,876		121329,22	0,0003
2	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/2	-	5	328,876		121329,22	0,0003
3	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/3	-	5	328,876		121329,22	0,0003
4	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/4	-	5	328,876		121329,22	0,0003
5	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/5	-	5	328,876		121329,22	0,0003
6	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/6	-	5	328,876		121329,22	0,0003
7	Bracket	Plate	Bracket/	B1/MP/LC/DB/Bracket/7	-	5	328,876		121329,22	0,0003
Main Deck Plat			B1/MP/TF-16/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/MP/TF-16/Bracket/1	-	5	300		65313,6499	0,0002
2	Bracket	Plate	Bracket/	B1/MP/TF-16/Bracket/2	-	5	300		65313,6499	0,0002
3	Bracket	Plate	Bracket/	B1/MP/TF-16/Bracket/3	-	5	300		65313,6499	0,0002
Frame 13 to Tank Top Plate			B1/Fr13-TT/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/1	-	5	300		65313,6499	0,0002
2	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/2	-	5	300		65313,6499	0,0002
3	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/3	-	5	300		65313,6499	0,0002
4	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/4	-	5	300		65313,6499	0,0002
5	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/5	-	5	300		65313,6499	0,0002
6	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/6	-	5	300		65313,6499	0,0002
7	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/7	-	5	300		65313,6499	0,0002
8	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/8	-	5	300		65313,6499	0,0002
9	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/9	-	5	300		65313,6499	0,0002
10	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/10	-	5	300		65313,6499	0,0002
11	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/11	-	5	300		65313,6499	0,0002
12	Bracket	Plate	Bracket/	B1/Fr13-TT/Bracket/12	-	5	300		65313,6499	0,0002
Frame 13 to Wing Tank			B1/Fr13-WT/SS/							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)



		Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
		Plate	Bracket/	B1/Fr13-WT/SS/Bracket/1	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13-WT/SS/Bracket/2	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13-WT/SS/Bracket/3	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13-WT/SS/Bracket/4	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13-WT/SS/Bracket/5	-	5	300		65313.6499	0,0002	
			B1/Fr13/MD-WT/								
											Portside and Starboard
		Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
		Plate	Bracket/	B1/Fr13/MD-WT/Bracket/1	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13/MD-WT/Bracket/2	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13/MD-WT/Bracket/3	-	5	300		65313.6499	0,0002	
		Plate	Bracket/	B1/Fr13/MD-WT/Bracket/4	-	5	300		65313.6499	0,0002	
4		Bracket									
			B1/Fr13/MD-P/								
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
1	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/1	-	5	300		65313.6499	0,0002	
2	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/2	-	5	300		65313.6499	0,0002	
3	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/3	-	5	300		65313.6499	0,0002	
4	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/4	-	5	300		65313.6499	0,0002	
5	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/5	-	5	300		65313.6499	0,0002	
6	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/6	-	5	300		65313.6499	0,0002	
7	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/7	-	5	300		65313.6499	0,0002	
8	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/8	-	5	300		65313.6499	0,0002	
9	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/9	-	5	300		65313.6499	0,0002	
10	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/10	-	5	300		65313.6499	0,0002	
11	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/11	-	5	300		65313.6499	0,0002	
12	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/12	-	5	300		65313.6499	0,0002	
13	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/13	-	5	300		65313.6499	0,0002	
14	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/14	-	5	300		65313.6499	0,0002	
15	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/15	-	5	300		65313.6499	0,0002	
16	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/16	-	5	300		65313.6499	0,0002	
17	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/17	-	5	300		65313.6499	0,0002	
18	Bracket	Plate	Bracket/	B1/Fr13/MD-P/Bracket/18	-	5	300		65313.6499	0,0002	
			B1/Fr17/MD-P/								
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
1	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/1	-	5	300		65313.6499	0,0002	
2	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/2	-	5	300		65313.6499	0,0002	
3	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/3	-	5	300		65313.6499	0,0002	
4	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/4	-	5	300		65313.6499	0,0002	
5	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/5	-	5	300		65313.6499	0,0002	
6	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/6	-	5	300		65313.6499	0,0002	
7	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/7	-	5	300		65313.6499	0,0002	
8	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/8	-	5	300		65313.6499	0,0002	
9	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/9	-	5	300		65313.6499	0,0002	
10	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/10	-	5	300		65313.6499	0,0002	
11	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/11	-	5	300		65313.6499	0,0002	
12	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/12	-	5	300		65313.6499	0,0002	
13	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/13	-	5	300		65313.6499	0,0002	
14	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/14	-	5	300		65313.6499	0,0002	
15	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/15	-	5	300		65313.6499	0,0002	
16	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/16	-	5	300		65313.6499	0,0002	
17	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/17	-	5	300		65313.6499	0,0002	
18	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/18	-	5	300		65313.6499	0,0002	
19	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/19	-	5	414,453		159099,034	0,0004	
20	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/20	-	5	414,453		159099,034	0,0004	
21	Bracket	Plate	Bracket/	B1/Fr17/MD-P/Bracket/21	-	5	414,453		159099,034	0,0004	
			B1/Fr13/LF/SS/								
											Portside and Starboard
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	



	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/1	-	5	689,501		302764,969	0,0008	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/2	-	5	639,151		277590,144	0,0008	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/3	-	5	561,602		238815,615	0,0007	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/4	-	5	511,764		213896,556	0,0006	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/5	-	5	407,257		155892,672	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/6	-	5	407,257		155892,672	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/7	-	5	407,257		155892,672	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/8	-	5	407,257		155892,672	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/9	-	5	407,257		155892,672	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/10	-	5	474,5		186433,797	0,0005	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/11	-	5	438,383		151251,293	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/12	-	5	438,383		136605,934	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/13	-	5	438,383		136605,934	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/14	-	5	438,383		136605,934	0,0004	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/15	-	5	232,184		70867,0173	0,0002	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/16	-	5	232,184		70867,0173	0,0002	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/17	-	5	232,184		70867,0173	0,0002	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/18	-	5	232,184		70867,0173	0,0002	
	Plate	Bracket/	B1/Fr13/LF/SS/Bracket/19	-	5	232,184		70867,0173	0,0002	
Frame 17 to Long Stiffener Side Shell			B1/Fr17/LF/SS/	Portside and Starboard						
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm3)	Berat (Ton)
1	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/1	-	5	689,501		302764,969	0,0008
2	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/2	-	5	639,151		277590,144	0,0008
3	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/3	-	5	561,602		238815,615	0,0007
4	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/4	-	5	511,764		213896,556	0,0006
5	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/5	-	5	407,257		155892,672	0,0004
6	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/6	-	5	407,257		155892,672	0,0004
7	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/7	-	5	407,257		155892,672	0,0004
8	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/8	-	5	407,257		155892,672	0,0004
9	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/9	-	5	407,257		155892,672	0,0004
10	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/10	-	5	474,5		186433,797	0,0005
11	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/11	-	5	438,383		151251,293	0,0004
12	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/12	-	5	438,383		136605,934	0,0004
13	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/13	-	5	438,383		136605,934	0,0004
14	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/14	-	5	438,383		136605,934	0,0004
15	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/15	-	5	232,184		70867,0173	0,0002
16	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/16	-	5	232,184		70867,0173	0,0002
17	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/17	-	5	232,184		70867,0173	0,0002
18	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/18	-	5	232,184		70867,0173	0,0002
19	Bracket	Plate	Bracket/	B1/Fr17/LF/SS/Bracket/19	-	5	232,184		70867,0173	0,0002



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)
				Breath (mm)	Thicknes s (mm)			
		SB-F/		B2/SB-F/				
		SB-F/		B2/SB-F/				
ame Portside		LF/B/		B2/SB-F/LF/B/				
ame Bottom Portside		Ps/		B2/SB-F/LF/B/Ps/				
P 1		1	B2/SB-F/LF/B/Ps/1	100x65	6	6000	954	5724000
2	LFP 2	2	B2/SB-F/LF/B/Ps/2	100x65	6	6000	954	5724000
3	LFP 3	3	B2/SB-F/LF/B/Ps/3	100x65	6	6000	954	5724000
4	LFP 4	4	B2/SB-F/LF/B/Ps/4	100x65	6	6000	954	5724000
5	LFP 5	5	B2/SB-F/LF/B/Ps/5	100x65	6	6000	954	5724000
6	LFP 6	6	B2/SB-F/LF/B/Ps/6	100x65	6	6000	954	5724000
7	LFP 7	7	B2/SB-F/LF/B/Ps/7	100x65	6	6000	954	5724000
8	LFP 8	8	B2/SB-F/LF/B/Ps/8	100x65	6	6000	954	5724000
9	LFP 9	9	B2/SB-F/LF/B/Ps/9	100x65	6	6000	954	5724000
10	LFP 10	10	B2/SB-F/LF/B/Ps/10	100x65	6	6000	954	5724000
11	LFP 11	11	B2/SB-F/LF/B/Ps/11	100x65	6	6000	954	5724000
10	LFP 12	12	B2/SB-F/LF/B/Ps/12	100x65	6	6000	954	5724000
11	LFP 13	13	B2/SB-F/LF/B/Ps/13	100x65	6	4800	954	4579200
b.	Long Frame Side Shell Portside	LF/Ss1/Ps/		B2/SB-F/LF/Ss1/Ps/				
1	LF/Ps/Ss1	1	B2/SB-F/LF/Ss1/Ps/1	85	5	3600	648,28	2333808
2	LF/Ps/Ss2	2	B2/SB-F/LF/Ss1/Ps/2	85	5	6000	648,28	3889680
3	LF/Ps/Ss3	3	B2/SB-F/LF/Ss1/Ps/3	85	5	6000	648,28	3889680
4	LF/Ps/Ss4	4	B2/SB-F/LF/Ss1/Ps/4	85	5	6000	648,28	3889680
5	LF/Ps/Ss5	5	B2/SB-F/LF/Ss1/Ps/5	85	5	6000	648,28	3889680
6	LF/Ps/Ss6	6	B2/SB-F/LF/Ss1/Ps/6	85	5	6000	648,28	3889680
7	LF/Ps/Ss7	7	B2/SB-F/LF/Ss1/Ps/7	85	5	6000	648,28	3889680
8	LF/Ps/Ss8	8	B2/SB-F/LF/Ss1/Ps/8	85	5	6000	648,28	3889680
9	LF/Ps/Ss9	9	B2/SB-F/LF/Ss1/Ps/9	85	5	6000	648,28	3889680
10	LF/Ps/Ss10	10	B2/SB-F/LF/Ss1/Ps/10	85	5	6000	648,28	3889680
A.1.2	Long Frame Starboard	LF/B/		B2/SB-F/LF/B/				
a.	Long Frame Bottom Starboard	Sb/		B2/SB-F/LF/B/Sb/				
1	LFP 1	1	B2/SB-F/LF/B/Sb/1	100x65	6	6000	954	5724000
2	LFP 2	2	B2/SB-F/LF/B/Sb/2	100x65	6	6000	954	5724000
3	LFP 3	3	B2/SB-F/LF/B/Sb/3	100x65	6	6000	954	5724000
4	LFP 4	4	B2/SB-F/LF/B/Sb/4	100x65	6	6000	954	5724000
5	LFP 5	5	B2/SB-F/LF/B/Sb/5	100x65	6	6000	954	5724000
6	LFP 6	6	B2/SB-F/LF/B/Sb/6	100x65	6	6000	954	5724000
7	LFP 7	7	B2/SB-F/LF/B/Sb/7	100x65	6	6000	954	5724000
8	LFP 8	8	B2/SB-F/LF/B/Sb/8	100x65	6	6000	954	5724000
9	LFP 9	9	B2/SB-F/LF/B/Sb/9	100x65	6	6000	954	5724000
10	LFP 10	10	B2/SB-F/LF/B/Sb/10	100x65	6	6000	954	5724000
11	LFP 11	11	B2/SB-F/LF/B/Sb/11	100x65	6	6000	954	5724000
10	LFP 12	12	B2/SB-F/LF/B/Sb/12	100x65	6	6000	954	5724000
11	LFP 13	13	B2/SB-F/LF/B/Sb/13	100x65	6	4800	954	4579200



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	
				Breath (mm)	Thicknes s (mm)				
ame Side Shell Starboard	LF/Ss1/Sb/			B2/SB-F/LF/Ss1/Sb/					
/Ps/Ss1	Bulb Plat	1	B2/SB-F/LF/Ss1/Sb/1	85	5	3600	648,28	2333808	
/Ps/Ss2		2	B2/SB-F/LF/Ss1/Sb/2	85	5	6000	648,28	3889680	
/Ps/Ss3		3	B2/SB-F/LF/Ss1/Sb/3	85	5	6000	648,28	3889680	
/Ps/Ss4		4	B2/SB-F/LF/Ss1/Sb/4	85	5	6000	648,28	3889680	
		5	B2/SB-F/LF/Ss1/Sb/5	85	5	6000	648,28	3889680	
		6	B2/SB-F/LF/Ss1/Sb/6	85	5	6000	648,28	3889680	
		7	B2/SB-F/LF/Ss1/Sb/7	85	5	6000	648,28	3889680	
		8	B2/SB-F/LF/Ss1/Sb/8	85	5	6000	648,28	3889680	
		9	B2/SB-F/LF/Ss1/Sb/9	85	5	6000	648,28	3889680	
		10	B2/SB-F/LF/Ss1/Sb/10	85	5	6000	648,28	3889680	
A.2	Tranverse Frame								
A.2.1	Transverse Frame 18	TF/Fr18/		B2/SB-F/TF/Fr18/					
	1 Centerline	CI/B/		B2/SB-F/TF/Fr18/CI/B/					
	Bottom Plat	Plate Bar	P	B2/SB-F/TF/Fr18/CI/B/P	5	-	5132142,36	25660711,8	
	Stiffener	Palte Bar	S1	B2/SB-F/TF/Fr18/CI/B/S1	90	8	720	1720800	
			S2	B2/SB-F/TF/Fr18/CI/B/S2	90	8	720	1720800	
			S3	B2/SB-F/TF/Fr18/CI/B/S3	90	8	720	1720800	
			S4	B2/SB-F/TF/Fr18/CI/B/S4	90	8	720	1720800	
	2 Portside	Ps/		B2/SB-F/TF/Fr18/Ps/					
a.	Bottom	B/		B2/SB-F/TF/Fr18/Ps/B/					
	Stiffener	Plate Bar	S1	B2/SB-F/TF/Fr18/Ps/B/S1	80	8	1349,86	640	863910,4
			S2	B2/SB-F/TF/Fr18/Ps/B/S2	80	8	550,67	640	352428,8
			S3	B2/SB-F/TF/Fr18/Ps/B/S3	80	8	289,59	640	185337,6
			S4	B2/SB-F/TF/Fr18/Ps/B/S4	80	8	1508,84	640	965657,6
			S5	B2/SB-F/TF/Fr18/Ps/B/S5	80	8	404,07	640	258604,8
b.	Side Shell	SS/		B2/SB-F/TF/Fr18/Ps/SS/					
	Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr18/Ps/SS/ WP	-	5	-	908838,53	4544192,65
		Face Plate	FP	B2/SB-F/TF/Fr18/Ps/SS/ FP	80	8	4581,83	640	2932371,2
	3 Starboard	Sb/		B2/SB-F/TF/Fr18/Sb/					
a.	Bottom	B/		B2/SB-F/TF/Fr18/Sb/B/					
	Stiffener	Plate Bar	S1	B2/SB-F/TF/Fr18/Sb/B/S1	80	8	1349,86	640	863910,4
			S2	B2/SB-F/TF/Fr18/Sb/B/S2	80	8	550,67	640	352428,8
			S3	B2/SB-F/TF/Fr18/Sb/B/S3	80	8	289,59	640	185337,6
			S4	B2/SB-F/TF/Fr18/Sb/B/S4	80	8	1508,84	640	965657,6
			S5	B2/SB-F/TF/Fr18/Sb/B/S5	80	8	404,07	640	258604,8
b.	Side Shell	SS/		B2/SB-F/TF/Fr18/Sb/SS/					
	Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr18/Sb/B/ WP	-	5	-	908838,53	4544192,65
		Face Plate	FP	B2/SB-F/TF/Fr18/Sb/B/ FP	80	8	4581,83	640	2932371,2
A.2.2	Transverse Frame 19	TF/Fr19/		B2/SB-F/TF/Fr19/					
1	Portside	Ps/		B2/SB-F/TF/Fr19/Ps/					
a.	Bottom	B/		B2/SB-F/TF/Fr19/Ps/B/					
	Section A	SA/		B2/SB-F/TF/Fr19/Ps/B/SA/					
		Plate Bar	P	B2/SB-F/TF/Fr19/Ps/B/SA/P	-	5	-	811057,482	4055287,41



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	
				Breath (mm)	Thicknes s (mm)				
Stiffener		S1	B2/SB-F/TF/Fr19/Ps/B/SA/S1	80	8	1278,909	640	818501,76	
		S2	B2/SB-F/TF/Fr19/Ps/B/SA/S2	80	8	997,68	640	638515,2	
		S3	B2/SB-F/TF/Fr19/Ps/B/SA/S3	80	8	1102,177	640	705393,28	
ction B		SB/	B2/SB-F/TF/Fr19/Ps/B/SB/						
Plate Bar		WP	B2/SB-F/TF/Fr19/Ps/B/SB/WP	-	5	-	1043236,546	5216182,73	
		FP	B2/SB-F/TF/Fr19/Ps/B/SB/FP	80	8	1265,93	640	810195,2	
Stiffener		S1	B2/SB-F/TF/Fr19/Ps/B/SB/S1	80	8	1347,174	640	862191,36	
		S2	B2/SB-F/TF/Fr19/Ps/B/SB/S2	80	8	751,458	640	480933,12	
		S3	B2/SB-F/TF/Fr19/Ps/B/SB/S3	80	8	246,086	640	157495,04	
		S4	B2/SB-F/TF/Fr19/Ps/B/SB/S4	80	8	1341,921	640	858829,44	
		S5	B2/SB-F/TF/Fr19/Ps/B/SB/S5	80	8	350,541	640	224346,24	
b.	Side Shell	SS/	B2/SB-F/TF/Fr19/Ps/SS/						
Frame Side Shell		Web Plate	B2/SB-F/TF/Fr19/Ps/SS/WP	-	5	-	734283,366	3671416,83	
		Face Plate	B2/SB-F/TF/Fr19/Ps/SS/FP	80	8	2785,253	640	1782561,92	
2	Starboard	Sb/	B2/SB-F/TF/Fr19/Sb/						
a.	Bottom	B/	B2/SB-F/TF/Fr19/Sb/B/						
Section A		SA/	B2/SB-F/TF/Fr19/Sb/B/SA/						
		Plate Bar	P	B2/SB-F/TF/Fr19/Sb/B/SA/P	-	5	-	811057,482	4055287,41
		Stiffener	S1	B2/SB-F/TF/Fr19/Sb/B/SA/S1	80	8	1278,909	640	818501,76
			S2	B2/SB-F/TF/Fr19/Sb/B/SA/S2	80	8	997,68	640	638515,2
			S3	B2/SB-F/TF/Fr19/Sb/B/SA/S3	80	8	1102,177	640	705393,28
b.	Section B	SB/	B2/SB-F/TF/Fr19/Sb/B/SB/						
Plate Bar		WP	B2/SB-F/TF/Fr19/Sb/B/SB/WP	-	5	-	1043236,546	5216182,73	
		FP	B2/SB-F/TF/Fr19/Sb/B/SB/FP	80	8	1265,93	640	810195,2	
Stiffener		S1	B2/SB-F/TF/Fr19/Sb/B/SB/S1	80	8	1347,174	640	862191,36	
		S2	B2/SB-F/TF/Fr19/Sb/B/SB/S2	80	8	751,458	640	480933,12	
		S3	B2/SB-F/TF/Fr19/Sb/B/SB/S3	80	8	246,086	640	157495,04	
		S4	B2/SB-F/TF/Fr19/Sb/B/SB/S4	80	8	1341,921	640	858829,44	
		S5	B2/SB-F/TF/Fr19/Sb/B/SB/S5	80	8	350,541	640	224346,24	
b.	Side Shell	SS/	B2/SB-F/TF/Fr19/Sb/SS/						
Frame Side Shell		Web Plate	B2/SB-F/TF/Fr19/Sb/SS/WP	-	5	-	734283,366	3671416,83	
		Face Plate	B2/SB-F/TF/Fr19/Sb/SS/FP	80	8	2785,253	640	1782561,92	
A.2.3	Transverse Frame 20	TF/Fr20/	B2/SB-F/TF/Fr20/						
1	Portside	Ps/	B2/SB-F/TF/Fr20/Ps/						
a.	Bottom	B/	B2/SB-F/TF/Fr20/Ps/B/						
Section A		SA/	B2/SB-F/TF/Fr20/Ps/B/SA/						
		Plate Bar	P	B2/SB-F/TF/Fr20/Ps/B/SA/P	-	5	-	1431440,42	7157202,1
		Stiffener	S1	B2/SB-F/TF/Fr20/Ps/B/SA/S1	80	8	1282,119	640	820556,16
			S2	B2/SB-F/TF/Fr20/Ps/B/SA/S2	80	8	991,964	640	634856,96
			S3	B2/SB-F/TF/Fr20/Ps/B/SA/S3	80	8	660,694	640	422844,16
S4	B2/SB-F/TF/Fr20/Ps/B/SA/S4		80	8	1100,277	640	704177,28		



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)
				Breath (mm)	Thicknes s (mm)			
Section B	SB/		B2/SB-F/TF/Fr20/Ps/B/SB/					
	Plate Bar	WP	B2/SB-F/TF/Fr20/Ps/B/SB/WP	-	5	-	944192,262	4720961,31
	Stiffener	S1	B2/SB-F/TF/Fr20/Ps/B/SB/S1	80	8	1062,291	640	679866,24
		S2	B2/SB-F/TF/Fr20/Ps/B/SB/S2	80	8	485,481	640	310707,84
		S3	B2/SB-F/TF/Fr20/Ps/B/SB/S3	80	8	292,321	640	187085,44
		S4	B2/SB-F/TF/Fr20/Ps/B/SB/S4	80	8	1214,849	640	777503,36
S5	B2/SB-F/TF/Fr20/Ps/B/SB/S5	80	8	393,387	640	251767,68		
b.	Side Shell	SS/		B2/SB-F/TF/Fr20/Ps/SS/				
Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr20/Ps/SS/WP	-	5	-	758063,366	3790316,83
	Face Plate	FP	B2/SB-F/TF/Fr20/Ps/SS/FP	80	8	4429,924	640	2835151,36
2	Starboard	Sb/		B2/SB-F/TF/Fr20/Sb/				
a.	Bottom	B/		B2/SB-F/TF/Fr20/Sb/B/				
		SA/		B2/SB-F/TF/Fr20/Sb/B/SA/				
Section A	Plate Bar	P	B2/SB-F/TF/Fr20/Sb/B/SA/P	-	5	-	1431440,42	7157202,1
	Stiffener	S1	B2/SB-F/TF/Fr20/Sb/B/SA/S1	80	8	1282,119	640	820556,16
		S2	B2/SB-F/TF/Fr20/Sb/B/SA/S2	80	8	991,964	640	634856,96
		S3	B2/SB-F/TF/Fr20/Sb/B/SA/S3	80	8	660,694	640	422844,16
		S4	B2/SB-F/TF/Fr20/Sb/B/SA/S4	80	8	1100,277	640	704177,28
b.	Section B	SB/		B2/SB-F/TF/Fr20/Sb/B/SB/				
Frame Side Shell	Plate Bar	WP	B2/SB-F/TF/Fr20/Sb/B/SB/WP	-	5	-	944192,262	4720961,31
	Stiffener	S1	B2/SB-F/TF/Fr20/Sb/B/SB/S1	80	8	1062,291	640	679866,24
		S2	B2/SB-F/TF/Fr20/Sb/B/SB/S2	80	8	485,481	640	310707,84
		S3	B2/SB-F/TF/Fr20/Sb/B/SB/S3	80	8	292,321	640	187085,44
		S4	B2/SB-F/TF/Fr20/Sb/B/SB/S4	80	8	1214,849	640	777503,36
		S5	B2/SB-F/TF/Fr20/Sb/B/SB/S5	80	8	393,387	640	251767,68
b.	Side Shell	SS/		B2/SB-F/TF/Fr20/Sb/SS/				
Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr20/Sb/SS/WP	-	5	-	758063,366	3790316,83
	Face Plate	FP	B2/SB-F/TF/Fr20/Sb/SS/FP	80	8	4429,924	640	2835151,36
A.2.4	Transverse Frame 21	TF/Fr21/		B2/SB-F/TF/Fr21/				
1	Portside	Ps/		B2/SB-F/TF/Fr21/Ps/				
a.	Bottom	B/		B2/SB-F/TF/Fr21/Ps/B/				
		SA/		B2/SB-F/TF/Fr21/Ps/B/SA/				
Section A	Plate Bar	P	B2/SB-F/TF/Fr21/Ps/B/SA/P	-	5	-	898106,926	4490534,63
	Stiffener	S1	B2/SB-F/TF/Fr21/Ps/B/SA/S1	80	8	1310,044	640	838428,16
		S2	B2/SB-F/TF/Fr21/Ps/B/SA/S2	80	8	986,472	640	631342,08
		S3	B2/SB-F/TF/Fr21/Ps/B/SA/S3	80	8	631,777	640	404337,28
		S4	B2/SB-F/TF/Fr21/Ps/B/SA/S4	80	8	1102,177	640	705393,28
b.	Section B	SB/		B2/SB-F/TF/Fr21/Ps/B/SB/				
Frame Side Shell	Plate Bar	WP	B2/SB-F/TF/Fr21/Ps/B/SB/WP	-	5	-	865711,714	4328558,57
	Stiffener	S1	B2/SB-F/TF/Fr21/Ps/B/SB/S1	80	8	1047,8	640	670592
		S2	B2/SB-F/TF/Fr21/Ps/B/SB/S2	80	8	953,149	640	610015,36
		S3	B2/SB-F/TF/Fr21/Ps/B/SB/S3	80	8	434,92	640	278348,8
c.	Side Shell	SS/		B2/SB-F/TF/Fr21/Ps/SS/				



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	
				Breath (mm)	Thicknes s (mm)				
ame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr21/Ps/SS/WP	-	5	-	765868,166	3829340,83	
	Face Plate	FP	B2/SB-F/TF/Fr21/Ps/SS/FP	80	8	4229,95	640	2707168	
arboard	Sb/		B2/SB-F/TF/Fr21/Sb/						
ttom	B/		B2/SB-F/TF/Fr21/Sb/B/						
ction A	SA/		B2/SB-F/TF/Fr21/Sb/B/SA/						
	Plate Bar	P	B2/SB-F/TF/Fr21/Sb/B/SA/P	-	5	-	898106,926	4490534,63	
	Stiffener	S1	B2/SB-F/TF/Fr21/Sb/B/SA/S1	80	8	1310,044	640	838428,16	
		S2	B2/SB-F/TF/Fr21/Sb/B/SA/S2	80	8	986,472	640	631342,08	
		S3	B2/SB-F/TF/Fr21/Sb/B/SA/S3	80	8	631,777	640	404337,28	
		S4	B2/SB-F/TF/Fr21/Sb/B/SA/S4	80	8	1102,177	640	705393,28	
	SB/		B2/SB-F/TF/Fr21/Sb/B/SB/						
b. Section B	Plate Bar	WP	B2/SB-F/TF/Fr21/Sb/B/SB/WP	-	5	-	865711,714	4328558,57	
	Stiffener	S1	B2/SB-F/TF/Fr21/Sb/B/SB/S1	80	8	1047,8	640	670592	
		S2	B2/SB-F/TF/Fr21/Sb/B/SB/S2	80	8	953,149	640	610015,36	
		S3	B2/SB-F/TF/Fr21/Sb/B/SB/S3	80	8	434,92	640	278348,8	
c. Side Shell	SS/		B2/SB-F/TF/Fr21/Sb/SS/						
Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr21/Sb/SS/WP	-	5	-	765868,166	3829340,83	
	Face Plate	FP	B2/SB-F/TF/Fr21/Sb/SS/FP	80	8		640	0	
B. Sub Block Transversal Bulkhead	S-TB/		B2/S-TB/						
B.1 Bulkhead Frame 22	Fr22/		B2/S-TB/Fr22/						
	P/		B2/S-TB/Fr22/P/						
B.1.1	Plate Bulkhead	Plate Bar	1	B2/S-TB/Fr22/P/1	-	5	-	529686,482	2648432,41
			2	B2/S-TB/Fr22/P/2	-	5	-	6665454,96	33327274,8
			3	B2/S-TB/Fr22/P/3	-	5	-	781791,04	3908955,2
			4	B2/S-TB/Fr22/P/4	-	5	-	9810268,92	49051344,6
			5	B2/S-TB/Fr22/P/5	-	5	-	3872580,74	19362903,7
B.1.2	Stiffener Bulkhead	Sf/		B2/S-TB/Fr22/Sf/					
1	Plate Bar	Plate Bar	FB1	B2/S-TB/Fr22/Sf/FB1	90	8	1799,356	720	1295536,32
			FB2	B2/S-TB/Fr22/Sf/FB2	90	8	2390	720	1720800
			FB3	B2/S-TB/Fr22/Sf/FB3	90	8	2390	720	1720800
			FB4	B2/S-TB/Fr22/Sf/FB4	90	8	2390	720	1720800
			FB5	B2/S-TB/Fr22/Sf/FB5	90	8	6153,66	720	4430635,2
			FB6	B2/S-TB/Fr22/Sf/FB6	90	8	1374	720	989280
			FB7	B2/S-TB/Fr22/Sf/FB7	90	8	460	720	331200
			FB8	B2/S-TB/Fr22/Sf/FB8	90	8	6153,66	720	4430635,2
			Tb1	B2/S-TB/Fr22/Sf/Tb1	100 x 65	6	1072,069	954	1022753,826
Tb2	B2/S-TB/Fr22/Sf/Tb2	100 x 65	6	1843,45	954	1758651,3			
Tb3	B2/S-TB/Fr22/Sf/Tb3	100 x 65	6	2028,552	954	1935238,608			
Tb4	B2/S-TB/Fr22/Sf/Tb4	100 x 65	6	2172,41	954	2072479,14			
Tb5	B2/S-TB/Fr22/Sf/Tb5	100 x 65	6	2315,048	954	2208555,792			
Tb6	B2/S-TB/Fr22/Sf/Tb6	100 x 65	6	2460,69	954	2347498,26			
Tb7	B2/S-TB/Fr22/Sf/Tb7	100 x 65	6	2599,14	954	2479579,56			
Tb8	B2/S-TB/Fr22/Sf/Tb8	101 x 65	6	2197	954	2095938			
Tb9	B2/S-TB/Fr22/Sf/Tb9	102 x 65	6	2197	954	2095938			



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)		
				Breath (mm)	Thicknes s (mm)					
Stiffener T	T Bar	Tb10	B2/S-TB/Fr22/Sf/Tb10	101 x 65	6	2197	954	2095938		
		Tb11	B2/S-TB/Fr22/Sf/Tb11	102 x 65	6	2197	954	2095938		
		Tb12	B2/S-TB/Fr22/Sf/Tb12	100 x 65	6	2197	954	2095938		
		Tb13	B2/S-TB/Fr22/Sf/Tb13	100 x 65	6	2197	954	2095938		
		Tb14	B2/S-TB/Fr22/Sf/Tb14	100 x 65	6	2599,14	954	2479579,56		
		Tb15	B2/S-TB/Fr22/Sf/Tb15	100 x 65	6	2460,69	954	2347498,26		
		Tb16	B2/S-TB/Fr22/Sf/Tb16	100 x 65	6	2315,048	954	2208555,792		
		Tb17	B2/S-TB/Fr22/Sf/Tb17	100 x 65	6	2172,41	954	2072479,14		
		Tb18	B2/S-TB/Fr22/Sf/Tb18	100 x 65	6	2028,552	954	1935238,608		
		Tb19	B2/S-TB/Fr22/Sf/Tb19	100 x 65	6	1843,45	954	1758651,3		
Tb20	B2/S-TB/Fr22/Sf/Tb20	100 x 65	6	1072,069	954	1022753,826				
C.	Sub Blok Deck	SB-D/		B2/SB-D/						
C.1	Long Deck Girder	LDG/		B2/SB-D/LDG/						
		CI/		B2/SB-D/LDG/CI/						
	1	Centerline	Bulb Plat	1	B2/SB-D/LDG/CI/1	60	5	4495,64	408,28	1835479,899
				2	B2/SB-D/LDG/CI/2	60	5	5760	408,28	2351692,8
				3	B2/SB-D/LDG/CI/3	60	5	5760	408,28	2351692,8
				4	B2/SB-D/LDG/CI/4	60	5	5760	408,28	2351692,8
				5	B2/SB-D/LDG/CI/5	60	5	5760	408,28	2351692,8
				6	B2/SB-D/LDG/CI/6	60	5	5760	408,28	2351692,8
				7	B2/SB-D/LDG/CI/7	60	5	3360	408,28	1371820,8
				8	B2/SB-D/LDG/CI/8	60	5	3360	408,28	1371820,8
				9	B2/SB-D/LDG/CI/9	60	5	2094,55	408,28	855162,874
			Plate Bar	FB1	B2/SB-D/LDG/CI/1	60	5	415	300	124500
	FB2	B2/SB-D/LDG/CI/2		60	5	415	300	124500		
	2	Portside	Bulb Plat	Ps/		B2/SB-D/LDG/Ps/				
				1	B2/SB-D/LDG/Ps/1	60	5	5760	408,28	2351692,8
				2	B2/SB-D/LDG/Ps/2	60	5	5760	408,28	2351692,8
				3	B2/SB-D/LDG/Ps/3	60	5	5760	408,28	2351692,8
				4	B2/SB-D/LDG/Ps/4	60	5	5760	408,28	2351692,8
				5	B2/SB-D/LDG/Ps/5	60	5	5760	408,28	2351692,8
				6	B2/SB-D/LDG/Ps/6	60	5	5760	408,28	2351692,8
				7	B2/SB-D/LDG/Ps/7	60	5	3360	408,28	1371820,8
			8	B2/SB-D/LDG/Ps/8	60	5	3360	408,28	1371820,8	
			3	Starboard	Bulb Plat	Sb/		B2/SB-D/LDG/Sb/		
	1	B2/SB-D/LDG/Sb/1				60	5	5760	408,28	2351692,8
	2	B2/SB-D/LDG/Sb/2				60	5	5760	408,28	2351692,8
	3	B2/SB-D/LDG/Sb/3				60	5	5760	408,28	2351692,8
	4	B2/SB-D/LDG/Sb/4				60	5	5760	408,28	2351692,8
	5	B2/SB-D/LDG/Sb/5				60	5	5760	408,28	2351692,8
	6	B2/SB-D/LDG/Sb/6				60	5	5760	408,28	2351692,8
	7	B2/SB-D/LDG/Sb/7	60	5	3360	408,28	1371820,8			



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)		
				Breath (mm)	Thicknes s (mm)					
		8	B2/SB-D/LDG/Sb/8	60	5	3360	408,28	1371820,8		
Deck Beam		TDB/		B2/SB-D/TDB/						
Transverse Deck Beam Frame 18		Fr18/		B2/SB-D/TDB/Fr18/						
		CI/		B2/SB-D/TDB/Fr18/CI/						
C.2.1	a.	Centerline	Plate	WP	B2/SB-D/TDB/Fr18/CI/WP	187	5	-	456037,512	2280187,56
				FP	B2/SB-D/TDB/Fr18/CI/FP	60	6	2191,97	360	789109,2
	b.	Portside	Plate	Ps/		B2/SB-D/TDB/Fr18/Ps/				
				WP	B2/SB-D/TDB/Fr18/Ps/WP	187	5	-	379970,146	1899850,73
				FP	B2/SB-D/TDB/Fr18/Ps/FP	60	6	1872,737	360	674185,32
				Sb/		B2/SB-D/TDB/Fr18/Sb/				
c.	Starboard	Plate	WP	B2/SB-D/TDB/Fr18/Sb/WP	187	5	-	379970,146	1899850,73	
			FP	B2/SB-D/TDB/Fr18/Sb/FP	60	6	1872,737	360	674185,32	
Transverse Deck Beam Frame 19		Fr19/		B2/SB-D/TDB/Fr19/						
C.2.2	a.	Centerline	CI/		B2/SB-D/TDB/Fr19/CI/					
			Plate	WP	B2/SB-D/TDB/Fr19/CI/WP	187	5	-	458301,976	2291509,88
				FP	B2/SB-D/TDB/Fr19/CI/FP	60	6	2376,395	360	855502,2
	b.	Portside	Plate	Ps/		B2/SB-D/TDB/Fr19/Ps/				
				WP	B2/SB-D/TDB/Fr19/Ps/WP	187	5	-	367330,436	1836652,18
				FP1	B2/SB-D/TDB/Fr19/Ps/FP1	60	6	1106,195	360	398230,2
				FP2	B2/SB-D/TDB/Fr19/Ps/FP2	60	6	261,23	360	94042,8
	c.	Starboard	Plate	Sb/		B2/SB-D/TDB/Fr19/Sb/				
				WP	B2/SB-D/TDB/Fr19/Sb/WP	187	5	-	367330,436	1836652,18
FP	B2/SB-D/TDB/Fr19/Sb/FP	60	6	1807,94	360	650858,4				
Transverse Deck Beam Frame 20		Fr20/		B2/SB-D/TDB/Fr20/						
C.2.3	a.	Centerline	CI/		B2/SB-D/TDB/Fr20/CI/					
			Plate	WP1	B2/SB-D/TDB/Fr20/CI/WP1	187	5	-	322946,248	1614731,24
				FP1	B2/SB-D/TDB/Fr20/CI/FP1	60	6	1475	360	531000
			Plate	WP2	B2/SB-D/TDB/Fr20/CI/WP2	187	5	-	165467,716	827338,58
				FP2	B2/SB-D/TDB/Fr20/CI/FP2	60	6	753	360	271080
	b.	Portside	Plate	Ps/		B2/SB-D/TDB/Fr20/Ps/				
				WP	B2/SB-D/TDB/Fr20/Ps/WP	187	5	-	367330,436	1836652,18
	FP	B2/SB-D/TDB/Fr20/Ps/FP	60	6	1807,94	360	650858,4			
	c.	Starboard	Plate	Sb/		B2/SB-D/TDB/Fr20/Sb/				
WP				B2/SB-D/TDB/Fr20/Sb/WP	187	5	-	367330,436	1836652,18	
FP	B2/SB-D/TDB/Fr20/Sb/FP	60	6	1807,94	360	650858,4				
Transverse Deck Beam Frame 21		Fr21/		B2/SB-D/TDB/Fr21/						
a.	Centerline	CI/		B2/SB-D/TDB/Fr21/CI/						
		Plate	WP	B2/SB-D/TDB/Fr21/CI/WP	187	5	-	322942,874	1614714,37	
			FP	B2/SB-D/TDB/Fr21/CI/FP	60	6	1475	360	531000	



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				Breath (mm)	Thicknes s (mm)				
Portside	Ps/		B2/SB-D/TDB/Fr21/Ps/						
	Plate	WP	B2/SB-D/TDB/Fr21/Ps/WP	187	5	-	367330,436	1836652,18	
		FP	B2/SB-D/TDB/Fr21/Ps/FP	60	6	1807,94	360	650858,4	
Starboard	Sb/		B2/SB-D/TDB/Fr21/Sb/						
	Plate	WP	B2/SB-D/TDB/Fr21/Sb/WP	187	5	-	367330,436	1836652,18	
		FP	B2/SB-D/TDB/Fr21/Sb/FP	60	6	1807,94	360	650858,4	
C.3 Main Deck Plat	MP/		B2/SB-D/MP/						
Plate Main Deck	Plate	1	B2/SB-D/MP/1	-	5	-	1480712,8	7403564	
		2	B2/SB-D/MP/2	-	5	-	5364695,24	26823476,2	
		3	B2/SB-D/MP/3	-	5	-	11324553,94	56622769,7	
		4	B2/SB-D/MP/4	-	5	-	10674067,72	53370338,6	
		5	B2/SB-D/MP/5	-	5	-	10402269,38	52011346,9	
		6	B2/SB-D/MP/6	-	5	-	7106989,8	35534949	
D. Sub Block Longitudinal Construction	SB-LC/		B2/SB-LC/						
D.1 Bottom Longitudinal	B/		B2/SB-LC/B/						
Centerline	CI/		B2/SB-LC/B/CI/						
	a. Keel Plate	Plate Bar	K3	B2/SB-LC/B/CI/K3	150	15	-	861909,0467	12928635,7
D.1.1	b. Tank Construction	Web Plate	Tc/		B2/SB-LC/B/CI/Tc/				
			WP1	B2/SB-LC/B/CI/Tc/WP1	-	5	-	1448486,82	7242434,1
			WP2	B2/SB-LC/B/CI/Tc/WP2	-	5	-	3118288,66	15591443,3
		Stiffener	FP1	B2/SB-LC/B/CI/Tc/FP1	80	8	3168,903	640	2028097,92
			FP2	B2/SB-LC/B/CI/Tc/FP2	80	8	3409,694	640	2182204,16
			FP3	B2/SB-LC/B/CI/Tc/FP3	80	8	3631,966	640	2324458,24
			FP4	B2/SB-LC/B/CI/Tc/FP4	80	8	3649,85	640	2335904
			FP5	B2/SB-LC/B/CI/Tc/FP5	80	8	3452,319	640	2209484,16
Portside	Ps/		B2/SB-LC/B/Ps/						
	b. Longitudinal Tank Bulkhead Portside	Bkh/		B2/SB-LC/B/Ps/Bkh/					
Web Plate		WP1	B2/SB-LC/B/Ps/Bkh/WP1	-	5	-	785032,036	3925160,18	
		WP2	B2/SB-LC/B/Ps/Bkh/WP2	-	5	-	4997843,82	24989219,1	
Stiffener	FP1	B2/SB-LC/B/Ps/Bkh/FP1	90	8	2607,427	720	1877347,44		
	FP2	B2/SB-LC/B/Ps/Bkh/FP2	90	8	4558,097	720	3281829,84		
	FP3	B2/SB-LC/B/Ps/Bkh/FP3	90	8	4558,097	720	3281829,84		
	FP4	B2/SB-LC/B/Ps/Bkh/FP4	90	8	4558,097	720	3281829,84		
	FP5	B2/SB-LC/B/Ps/Bkh/FP5	90	8	4558,097	720	3281829,84		
Starboard	Sb/		B2/SB-LC/B/Sb/						
	b. Longitudinal Tank Bulkhead Starboard	Bkh/		B2/SB-LC/B/Sb/Bkh/					
Web Plate		WP1	B2/SB-LC/B/Sb/Bkh/WP1	-	5	-	785032,036	3925160,18	
		WP2	B2/SB-LC/B/Sb/Bkh/WP2	-	5	-	4997843,82	24989219,1	
Stiffener	FP1	B2/SB-LC/B/Sb/Bkh/FP1	90	8	2607,427	720	1877347,44		
	FP2	B2/SB-LC/B/Sb/Bkh/FP2	90	8	4558,097	720	3281829,84		
	FP3	B2/SB-LC/B/Sb/Bkh/FP3	90	8	4558,097	720	3281829,84		
	FP4	B2/SB-LC/B/Sb/Bkh/FP4	90	8	4558,097	720	3281829,84		
	FP5	B2/SB-LC/B/Sb/Bkh/FP5	90	8	4558,097	720	3281829,84		
D.2 Longitudinal Deck Beam	D/		B2/SB-LC/D/						
Centerline	CI/		B2/SB-LC/D/CI/						



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				Breath (mm)	Thicknes s (mm)							
Deck	Plate Bar	WP	B2/SB-LC/D/Ci/WP	-	8	-	427200	3417600				
		FP	B2/SB-LC/D/Ci/FP	120	15	2400	1800	4320000				
		Ps/	B2/SB-LC/D/Ps/									
Deck	Plate Bar	WP1	B2/SB-LC/D/Ps/WP1	-	8	-	484536,4863	3876291,89				
		WP2	B2/SB-LC/D/Ps/WP2	-	8	-	657714,7138	5261717,71				
D.2.2	b.	Deck	Plate Bar	FP1	B2/SB-LC/D/Ps/FP1	120	15	211	1800	379800		
				FP2	B2/SB-LC/D/Ps/FP2	120	15	893,848	1800	1608926,4		
				FP3	B2/SB-LC/D/Ps/FP3	120	15	1205	1800	2169000		
				FP4	B2/SB-LC/D/Ps/FP4	120	15	3695,183	1800	6651329,4		
		Sb/	B2/SB-LC/D/Sb/									
D.2.3	a.	Deck	Plate Bar	WP1	B2/SB-LC/D/Sb/WP1	-	8	-	484536,4863	3876291,89		
				WP2	B2/SB-LC/D/Sb/WP2	-	8	-	657714,7138	5261717,71		
				FP1	B2/SB-LC/D/Sb/FP1	120	15	211	1800	379800		
				FP2	B2/SB-LC/D/Sb/FP2	120	15	893,848	1800	1608926,4		
D.2.4	b.	Deck	Plate Bar	FP3	B2/SB-LC/D/Sb/FP3	120	15	1205	1800	2169000		
				FP4	B2/SB-LC/D/Sb/FP4	120	15	3695,183	1800	6651329,4		
						SA-3/	B2/SB-LC/D/SA-3/					
						Ps/	B2/SB-LC/D/SA-3/Ps/					
D.2.4	a.	Deck	Plate Bar	WP	B2/SB-LC/D/SA-3/Ps/WP	-	8	-	417906,8625	3343254,9		
				FP	B2/SB-LC/D/SA-3/Ps/FP	100	10	2223,38	1000	2223380		
		Sb/	B2/SB-LC/D/SA-3/Sb/									
D.2.4	b.	Deck	Plate Bar	WP	B2/SB-LC/D/SA-3/Sb/WP	-	8	-	417906,8625	3343254,9		
				FP	B2/SB-LC/D/SA-3/Sb/FP	100	10	2223,38	1000	2223380		
E	Sub Block Bottom		SB-B/		B2/SB-B/							
E.1	Tank Top Stiffener		TT/Bp/		B2/SB-B/TT/Bp/							
			Bulb Plat	1	B2/SB-B/TT/Bp/1	85	5	4794,75	648,28	3108340,53		
				2	B2/SB-B/TT/Bp/2	85	5	4794,75	648,28	3108340,53		
				3	B2/SB-B/TT/Bp/3	85	5	3595	648,28	2330566,6		
				4	B2/SB-B/TT/Bp/4	85	5	4794,75	648,28	3108340,53		
				5	B2/SB-B/TT/Bp/5	85	5	4794,75	648,28	3108340,53		
	6	B2/SB-B/TT/Bp/6		85	5	4794,75	648,28	3108340,53				
E.2	Tank Top Plate		TT/		B2/SB-B/TT/							
			Plate Bar	P1	B2/SB-B/TT/P1	-	8	-	690600,0738	5524800,59		
				P2	B2/SB-B/TT/P2	-	8	-	812528,0738	6500224,59		
				P3	B2/SB-B/TT/P3	-	5	-	8556582,98	42782914,9		
				P4	B2/SB-B/TT/P4	-	5	-	3626492,14	18132460,7		
			Sf/	B2/SB-B/TT/Sf/								
			Plate Bar	1	B2/SB-B/TT/Sf/1	80	8	3299,416	640	2111626,24		
				2	B2/SB-B/TT/Sf/2	80	8	3299,416	640	2111626,24		
				3	B2/SB-B/TT/Sf/3	75	8	682,41	600	409446		
				4	B2/SB-B/TT/Sf/4	75	8	682,41	600	409446		
E.3	Pillar		TT/P/		B2/SB-B/TT/P/							
			Plate Bar	1	B2/SB-B/TT/P/1	-	8	-	34780,38038	278243,043		
				2	B2/SB-B/TT/P/2	-	8	-	29211,38538	233691,083		
	3	B2/SB-B/TT/P/3		-	8	-	29211,38538	233691,083				



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)
				Breath (mm)	Thicknes s (mm)			
		TT/Pi/				B2/SB-B/TT/Pi/		
	Pillar	1	B2/SB-B/TT/Pi/1	-	6,35	-	1057859,2	6717405,92
		2	B2/SB-B/TT/Pi/2	-	4,5	-	852149,6	3834673,2
		3	B2/SB-B/TT/Pi/3	-	4,5	-	852149,6	3834673,2
		SB-SS/				B2/SB-SS/		
F.1	Bottom	B/				B2/SB-SS/B/		
	Portside	Ps/				B2/SB-SS/B/Ps/		
F.1.1	Bottom Plate 1	Plate 1	B2/SB-SS/B/Ps/1	-	8	-	5605949,28	44847594,24
	Bottom Plate 2	Plate 2	B2/SB-SS/B/Ps/2	-	8	-	9684426,6	77475412,8
	Bottom Plate 3	Plate 3	B2/SB-SS/B/Ps/3	-	8	-	4502229,69	36017837,52
	Starboard	Sb/				B2/SB-SS/B/Sb/		
F.1.2	Bottom Plate 1	Plate 1	B2/SB-SS/B/Sb/1	-	8	-	5605949,28	44847594,24
	Bottom Plate 2	Plate 2	B2/SB-SS/B/Sb/2	-	8	-	9684426,6	77475412,8
	Bottom Plate 3	Plate 3	B2/SB-SS/B/Sb/3	-	8	-	4502229,69	36017837,52
F.2	Side Shell	S/				B2/SB-SS/S/		
	Portside	Ps/				B2/SB-SS/S/Ps/		
F.2.1	Side Shell Plate 1	Plate 1	B2/SB-SS/S/Ps/1	-	6	-	8428388,85	50570333,1
	Side Shell Plate 2	Plate 2	B2/SB-SS/S/Ps/2	-	6	-	4493929,867	26963579,2
	Starboard	Sb/				B2/SB-SS/S/Sb/		
F.2.2	Side Shell Plate 1	Plate 1	B2/SB-SS/S/Sb/1	-	6	-	8428388,85	50570333,1
	Side Shell Plate 2	Plate 2	B2/SB-SS/S/Sb/2	-	6	-	4493929,867	26963579,2



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber
				Breath (mm)	Thicknes s (mm)				
		SB-F/				B2/SB-F/			
		SB-F/				B2/SB-F/			
ame Portside		LF/B/				B2/SB-F/LF/B/			
ame Bottom Portside		Ps/				B2/SB-F/LF/B/Ps/			
P 1									
2	LFP 2	1	B2/SB-F/LF/B/Ps/1	100x65	6	6000	954	5724000	0
3	LFP 3	2	B2/SB-F/LF/B/Ps/2	100x65	6	6000	954	5724000	0
4	LFP 4	3	B2/SB-F/LF/B/Ps/3	100x65	6	6000	954	5724000	0
5	LFP 5	4	B2/SB-F/LF/B/Ps/4	100x65	6	6000	954	5724000	0
6	LFP 6	5	B2/SB-F/LF/B/Ps/5	100x65	6	6000	954	5724000	0
7	LFP 7	6	B2/SB-F/LF/B/Ps/6	100x65	6	6000	954	5724000	0
8	LFP 8	7	B2/SB-F/LF/B/Ps/7	100x65	6	6000	954	5724000	0
9	LFP 9	8	B2/SB-F/LF/B/Ps/8	100x65	6	6000	954	5724000	0
10	LFP 10	9	B2/SB-F/LF/B/Ps/9	100x65	6	6000	954	5724000	0
11	LFP 11	10	B2/SB-F/LF/B/Ps/10	100x65	6	6000	954	5724000	0
10	LFP 12	11	B2/SB-F/LF/B/Ps/11	100x65	6	6000	954	5724000	0
11	LFP 13	12	B2/SB-F/LF/B/Ps/12	100x65	6	6000	954	5724000	0
		13	B2/SB-F/LF/B/Ps/13	100x65	6	4800	954	4579200	0
b.	Long Frame Side Shell Portside	LF/Ss1/Ps/				B2/SB-F/LF/Ss1/Ps/			
1	LF/Ps/Ss1	1	B2/SB-F/LF/Ss1/Ps/1	85	5	3600	648,28	2333808	0
2	LF/Ps/Ss2	2	B2/SB-F/LF/Ss1/Ps/2	85	5	6000	648,28	3889680	0
3	LF/Ps/Ss3	3	B2/SB-F/LF/Ss1/Ps/3	85	5	6000	648,28	3889680	0
4	LF/Ps/Ss4	4	B2/SB-F/LF/Ss1/Ps/4	85	5	6000	648,28	3889680	0
5	LF/Ps/Ss5	5	B2/SB-F/LF/Ss1/Ps/5	85	5	6000	648,28	3889680	0
6	LF/Ps/Ss6	6	B2/SB-F/LF/Ss1/Ps/6	85	5	6000	648,28	3889680	0
7	LF/Ps/Ss7	7	B2/SB-F/LF/Ss1/Ps/7	85	5	6000	648,28	3889680	0
8	LF/Ps/Ss8	8	B2/SB-F/LF/Ss1/Ps/8	85	5	6000	648,28	3889680	0
9	LF/Ps/Ss9	9	B2/SB-F/LF/Ss1/Ps/9	85	5	6000	648,28	3889680	0
10	LF/Ps/Ss10	10	B2/SB-F/LF/Ss1/Ps/10	85	5	6000	648,28	3889680	0
A.1.2	Long Frame Starboard	LF/B/				B2/SB-F/LF/B/			
a.	Long Frame Bottom Starboard	Sb/				B2/SB-F/LF/B/Sb/			
1	LFP 1	1	B2/SB-F/LF/B/Sb/1	100x65	6	6000	954	5724000	0
2	LFP 2	2	B2/SB-F/LF/B/Sb/2	100x65	6	6000	954	5724000	0
3	LFP 3	3	B2/SB-F/LF/B/Sb/3	100x65	6	6000	954	5724000	0
4	LFP 4	4	B2/SB-F/LF/B/Sb/4	100x65	6	6000	954	5724000	0
5	LFP 5	5	B2/SB-F/LF/B/Sb/5	100x65	6	6000	954	5724000	0
6	LFP 6	6	B2/SB-F/LF/B/Sb/6	100x65	6	6000	954	5724000	0
7	LFP 7	7	B2/SB-F/LF/B/Sb/7	100x65	6	6000	954	5724000	0
8	LFP 8	8	B2/SB-F/LF/B/Sb/8	100x65	6	6000	954	5724000	0
9	LFP 9	9	B2/SB-F/LF/B/Sb/9	100x65	6	6000	954	5724000	0
10	LFP 10	10	B2/SB-F/LF/B/Sb/10	100x65	6	6000	954	5724000	0
11	LFP 11	11	B2/SB-F/LF/B/Sb/11	100x65	6	6000	954	5724000	0
10	LFP 12	12	B2/SB-F/LF/B/Sb/12	100x65	6	6000	954	5724000	0
11	LFP 13	13	B2/SB-F/LF/B/Sb/13	100x65	6	4800	954	4579200	0



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber.	
				Breath (mm)	Thicknes s (mm)					
ame Side Shell Starboard	LF/Ss1/Sb/			B2/SB-F/LF/Ss1/Sb/						
/Ps/Ss1	Bulb Plat	1	B2/SB-F/LF/Ss1/Sb/1	85	5	3600	648,28	2333808	0	
/Ps/Ss2		2	B2/SB-F/LF/Ss1/Sb/2	85	5	6000	648,28	3889680	0	
/Ps/Ss3		3	B2/SB-F/LF/Ss1/Sb/3	85	5	6000	648,28	3889680	0	
/Ps/Ss4		4	B2/SB-F/LF/Ss1/Sb/4	85	5	6000	648,28	3889680	0	
		5	B2/SB-F/LF/Ss1/Sb/5	85	5	6000	648,28	3889680	0	
		6	B2/SB-F/LF/Ss1/Sb/6	85	5	6000	648,28	3889680	0	
		7	B2/SB-F/LF/Ss1/Sb/7	85	5	6000	648,28	3889680	0	
		8	B2/SB-F/LF/Ss1/Sb/8	85	5	6000	648,28	3889680	0	
		9	B2/SB-F/LF/Ss1/Sb/9	85	5	6000	648,28	3889680	0	
		10	B2/SB-F/LF/Ss1/Sb/10	85	5	6000	648,28	3889680	0	
A.2	Tranverse Frame									
A.2.1	Transverse Frame 18	TF/Fr18/		B2/SB-F/TF/Fr18/						
1	Centerline	Cl/B/		B2/SB-F/TF/Fr18/Cl/B/						
	Bottom Plat	Plate Bar	P	B2/SB-F/TF/Fr18/Cl/B/P		5	-	5132142,36	25660711,8	0
	Stiffener	Paite Bar	S1	B2/SB-F/TF/Fr18/Cl/B/S1	90	8	2390	720	1720800	0
			S2	B2/SB-F/TF/Fr18/Cl/B/S2	90	8	2390	720	1720800	0
			S3	B2/SB-F/TF/Fr18/Cl/B/S3	90	8	2390	720	1720800	0
			S4	B2/SB-F/TF/Fr18/Cl/B/S4	90	8	2390	720	1720800	0
2	Portside	Ps/		B2/SB-F/TF/Fr18/Ps/						
a.	Bottom	B/		B2/SB-F/TF/Fr18/Ps/B/						
	Stiffener	Plate Bar	S1	B2/SB-F/TF/Fr18/Ps/B/S1	80	8	1349,86	640	863910,4	0
			S2	B2/SB-F/TF/Fr18/Ps/B/S2	80	8	550,67	640	352428,8	0
			S3	B2/SB-F/TF/Fr18/Ps/B/S3	80	8	289,59	640	185337,6	0
			S4	B2/SB-F/TF/Fr18/Ps/B/S4	80	8	1508,84	640	965657,6	0
			S5	B2/SB-F/TF/Fr18/Ps/B/S5	80	8	404,07	640	258604,8	0
b.	Side Shell	SS/		B2/SB-F/TF/Fr18/Ps/SS/						
	Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr18/Ps/SS/WP	-	5	-	908838,53	4544192,65	0
		Face Plate	FP	B2/SB-F/TF/Fr18/Ps/SS/FP	80	8	4581,83	640	2932371,2	0
3	Starboard	Sb/		B2/SB-F/TF/Fr18/Sb/						
a.	Bottom	B/		B2/SB-F/TF/Fr18/Sb/B/						
	Stiffener	Plate Bar	S1	B2/SB-F/TF/Fr18/Sb/B/S1	80	8	1349,86	640	863910,4	0
			S2	B2/SB-F/TF/Fr18/Sb/B/S2	80	8	550,67	640	352428,8	0
			S3	B2/SB-F/TF/Fr18/Sb/B/S3	80	8	289,59	640	185337,6	0
			S4	B2/SB-F/TF/Fr18/Sb/B/S4	80	8	1508,84	640	965657,6	0
			S5	B2/SB-F/TF/Fr18/Sb/B/S5	80	8	404,07	640	258604,8	0
b.	Side Shell	SS/		B2/SB-F/TF/Fr18/Sb/SS/						
	Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr18/Sb/B/WP	-	5	-	908838,53	4544192,65	0
		Face Plate	FP	B2/SB-F/TF/Fr18/Sb/B/FP	80	8	4581,83	640	2932371,2	0
A.2.2	Transverse Frame 19	TF/Fr19/		B2/SB-F/TF/Fr19/						
1	Portside	Ps/		B2/SB-F/TF/Fr19/Ps/						
a.	Bottom	B/		B2/SB-F/TF/Fr19/Ps/B/						
	Section A	SA/		B2/SB-F/TF/Fr19/Ps/B/SA/						
		Plate Bar	P	B2/SB-F/TF/Fr19/Ps/B/SA/P	-	5	-	811057,482	4055287,41	0



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber	
				Breath (mm)	Thicknes s (mm)					
Section B	Stiffener	S1	B2/SB-F/TF/Fr19/Ps/B/SA/S1	80	8	1278,909	640	818501,76	0	
		S2	B2/SB-F/TF/Fr19/Ps/B/SA/S2	80	8	997,68	640	638515,2	0	
		S3	B2/SB-F/TF/Fr19/Ps/B/SA/S3	80	8	1102,177	640	705393,28	0	
		SB/		B2/SB-F/TF/Fr19/Ps/B/SB/						
	Plate Bar	WP	B2/SB-F/TF/Fr19/Ps/B/SB/WP	-	5	-	1043236,546	5216182,73	0	
		FP	B2/SB-F/TF/Fr19/Ps/B/SB/FP	80	8	1265,93	640	810195,2	0	
	Stiffener	S1	B2/SB-F/TF/Fr19/Ps/B/SB/S1	80	8	1347,174	640	862191,36	0	
		S2	B2/SB-F/TF/Fr19/Ps/B/SB/S2	80	8	751,458	640	480933,12	0	
		S3	B2/SB-F/TF/Fr19/Ps/B/SB/S3	80	8	246,086	640	157495,04	0	
		S4	B2/SB-F/TF/Fr19/Ps/B/SB/S4	80	8	1341,921	640	858829,44	0	
		S5	B2/SB-F/TF/Fr19/Ps/B/SB/S5	80	8	350,541	640	224346,24	0	
	b.	Side Shell	SS/	B2/SB-F/TF/Fr19/Ps/SS/						
	Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr19/Ps/SS/WP	-	5	-	734283,366	3671416,83	0
		Face Plate	FP	B2/SB-F/TF/Fr19/Ps/SS/FP	80	8	2785,253	640	1782561,92	0
2	Starboard	Sb/		B2/SB-F/TF/Fr19/Sb/						
a.	Bottom	B/		B2/SB-F/TF/Fr19/Sb/B/						
	Section A	SA/		B2/SB-F/TF/Fr19/Sb/B/SA/						
		Plate Bar	P	B2/SB-F/TF/Fr19/Sb/B/SA/P	-	5	-	811057,482	4055287,41	0
			S1	B2/SB-F/TF/Fr19/Sb/B/SA/S1	80	8	1278,909	640	818501,76	0
		Stiffener	S2	B2/SB-F/TF/Fr19/Sb/B/SA/S2	80	8	997,68	640	638515,2	0
			S3	B2/SB-F/TF/Fr19/Sb/B/SA/S3	80	8	1102,177	640	705393,28	0
	b.	Section B	SB/	B2/SB-F/TF/Fr19/Sb/B/SB/						
	Plate Bar	WP	B2/SB-F/TF/Fr19/Sb/B/SB/WP	-	5	-	1043236,546	5216182,73	0	
		FP	B2/SB-F/TF/Fr19/Sb/B/SB/FP	80	8	1265,93	640	810195,2	0	
	Stiffener	S1	B2/SB-F/TF/Fr19/Sb/B/SB/S1	80	8	1347,174	640	862191,36	0	
		S2	B2/SB-F/TF/Fr19/Sb/B/SB/S2	80	8	751,458	640	480933,12	0	
		S3	B2/SB-F/TF/Fr19/Sb/B/SB/S3	80	8	246,086	640	157495,04	0	
		S4	B2/SB-F/TF/Fr19/Sb/B/SB/S4	80	8	1341,921	640	858829,44	0	
		S5	B2/SB-F/TF/Fr19/Sb/B/SB/S5	80	8	350,541	640	224346,24	0	
	b.	Side Shell	SS/	B2/SB-F/TF/Fr19/Sb/SS/						
	Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr19/Sb/SS/WP	-	5	-	734283,366	3671416,83	0
		Face Plate	FP	B2/SB-F/TF/Fr19/Sb/SS/FP	80	8	2785,253	640	1782561,92	0
A.2.3	Transverse Frame 20	TF/Fr20/		B2/SB-F/TF/Fr20/						
1	Portside	Ps/		B2/SB-F/TF/Fr20/Ps/						
a.	Bottom	B/		B2/SB-F/TF/Fr20/Ps/B/						
	Section A	SA/		B2/SB-F/TF/Fr20/Ps/B/SA/						
		Plate Bar	P	B2/SB-F/TF/Fr20/Ps/B/SA/P	-	5	-	1431440,42	7157202,1	0
			S1	B2/SB-F/TF/Fr20/Ps/B/SA/S1	80	8	1282,119	640	820556,16	0
		Stiffener	S2	B2/SB-F/TF/Fr20/Ps/B/SA/S2	80	8	991,964	640	634856,96	0
			S3	B2/SB-F/TF/Fr20/Ps/B/SA/S3	80	8	660,694	640	422844,16	0
	S4		B2/SB-F/TF/Fr20/Ps/B/SA/S4	80	8	1100,277	640	704177,28	0	



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber.
				Breath (mm)	Thicknes s (mm)				
ction B	SB/		B2/SB-F/TF/Fr20/Ps/B/SB/						
	Plate Bar	WP	B2/SB-F/TF/Fr20/Ps/B/SB/WP	-	5	-	944192,262	4720961,31	0
	Stiffener	S1	B2/SB-F/TF/Fr20/Ps/B/SB/S1	80	8	1062,291	640	679866,24	0
		S2	B2/SB-F/TF/Fr20/Ps/B/SB/S2	80	8	485,481	640	310707,84	0
		S3	B2/SB-F/TF/Fr20/Ps/B/SB/S3	80	8	292,321	640	187085,44	0
		S4	B2/SB-F/TF/Fr20/Ps/B/SB/S4	80	8	1214,849	640	777503,36	0
S5		B2/SB-F/TF/Fr20/Ps/B/SB/S5	80	8	393,387	640	251767,68	0	
b.	Side Shell	SS/		B2/SB-F/TF/Fr20/Ps/SS/					
Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr20/Ps/SS/WP	-	5	-	758063,366	3790316,83	0
	Face Plate	FP	B2/SB-F/TF/Fr20/Ps/SS/FP	80	8	4429,924	640	2835151,36	0
2	Starboard	Sb/		B2/SB-F/TF/Fr20/Sb/					
a.	Bottom	B/		B2/SB-F/TF/Fr20/Sb/B/					
		SA/		B2/SB-F/TF/Fr20/Sb/B/SA/					
Section A	Plate Bar	P	B2/SB-F/TF/Fr20/Sb/B/SA/P	-	5	-	1431440,42	7157202,1	0
Stiffener	S1	B2/SB-F/TF/Fr20/Sb/B/SA/S1	80	8	1282,119	640	820556,16	0	
	S2	B2/SB-F/TF/Fr20/Sb/B/SA/S2	80	8	991,964	640	634856,96	0	
	S3	B2/SB-F/TF/Fr20/Sb/B/SA/S3	80	8	660,694	640	422844,16	0	
	S4	B2/SB-F/TF/Fr20/Sb/B/SA/S4	80	8	1100,277	640	704177,28	0	
b.	Section B	SB/		B2/SB-F/TF/Fr20/Sb/B/SB/					
Plate Bar	WP	B2/SB-F/TF/Fr20/Sb/B/SB/WP	-	5	-	944192,262	4720961,31	0	
	S1	B2/SB-F/TF/Fr20/Sb/B/SB/S1	80	8	1062,291	640	679866,24	0	
	S2	B2/SB-F/TF/Fr20/Sb/B/SB/S2	80	8	485,481	640	310707,84	0	
	S3	B2/SB-F/TF/Fr20/Sb/B/SB/S3	80	8	292,321	640	187085,44	0	
	S4	B2/SB-F/TF/Fr20/Sb/B/SB/S4	80	8	1214,849	640	777503,36	0	
	S5	B2/SB-F/TF/Fr20/Sb/B/SB/S5	80	8	393,387	640	251767,68	0	
b.	Side Shell	SS/		B2/SB-F/TF/Fr20/Sb/SS/					
Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr20/Sb/SS/WP	-	5	-	758063,366	3790316,83	0
	Face Plate	FP	B2/SB-F/TF/Fr20/Sb/SS/FP	80	8	4429,924	640	2835151,36	0
A.2.4	Transverse Frame 21	TF/Fr21/		B2/SB-F/TF/Fr21/					
1	Portside	Ps/		B2/SB-F/TF/Fr21/Ps/					
a.	Bottom	B/		B2/SB-F/TF/Fr21/Ps/B/					
		SA/		B2/SB-F/TF/Fr21/Ps/B/SA/					
Section A	Plate Bar	P	B2/SB-F/TF/Fr21/Ps/B/SA/P	-	5	-	898106,926	4490534,63	0
Stiffener	S1	B2/SB-F/TF/Fr21/Ps/B/SA/S1	80	8	1310,044	640	838428,16	0	
	S2	B2/SB-F/TF/Fr21/Ps/B/SA/S2	80	8	986,472	640	631342,08	0	
	S3	B2/SB-F/TF/Fr21/Ps/B/SA/S3	80	8	631,777	640	404337,28	0	
	S4	B2/SB-F/TF/Fr21/Ps/B/SA/S4	80	8	1102,177	640	705393,28	0	
b.	Section B	SB/		B2/SB-F/TF/Fr21/Ps/B/SB/					
Plate Bar	WP	B2/SB-F/TF/Fr21/Ps/B/SB/WP	-	5	-	865711,714	4328558,57	0	
	S1	B2/SB-F/TF/Fr21/Ps/B/SB/S1	80	8	1047,8	640	670592	0	
	S2	B2/SB-F/TF/Fr21/Ps/B/SB/S2	80	8	953,149	640	610015,36	0	
	S3	B2/SB-F/TF/Fr21/Ps/B/SB/S3	80	8	434,92	640	278348,8	0	
c.	Side Shell	SS/		B2/SB-F/TF/Fr21/Ps/SS/					



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber.
				Breath (mm)	Thicknes s (mm)				
ame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr21/Ps/SS/WP	-	5	-	765868,166	3829340,83	0
	Face Plate	FP	B2/SB-F/TF/Fr21/Ps/SS/FP	80	8	4229,95	640	2707168	0
arboard	Sb/		B2/SB-F/TF/Fr21/Sb/						
ttom	B/		B2/SB-F/TF/Fr21/Sb/B/						
ction A	SA/		B2/SB-F/TF/Fr21/Sb/B/SA/						
	Plate Bar	P	B2/SB-F/TF/Fr21/Sb/B/SA/P	-	5	-	898106,926	4490534,63	0
	Stiffener	S1	B2/SB-F/TF/Fr21/Sb/B/SA/S1	80	8	1310,044	640	838428,16	0
		S2	B2/SB-F/TF/Fr21/Sb/B/SA/S2	80	8	986,472	640	631342,08	0
		S3	B2/SB-F/TF/Fr21/Sb/B/SA/S3	80	8	631,777	640	404337,28	0
		S4	B2/SB-F/TF/Fr21/Sb/B/SA/S4	80	8	1102,177	640	705393,28	0
	SB/		B2/SB-F/TF/Fr21/Sb/B/SB/						
b. Section B	Plate Bar	WP	B2/SB-F/TF/Fr21/Sb/B/SB/WP	-	5	-	865711,714	4328558,57	0
	Stiffener	S1	B2/SB-F/TF/Fr21/Sb/B/SB/S1	80	8	1047,8	640	670592	0
		S2	B2/SB-F/TF/Fr21/Sb/B/SB/S2	80	8	953,149	640	610015,36	0
		S3	B2/SB-F/TF/Fr21/Sb/B/SB/S3	80	8	434,92	640	278348,8	0
c. Side Shell	SS/		B2/SB-F/TF/Fr21/Sb/SS/						
Frame Side Shell	Web Plate	WP	B2/SB-F/TF/Fr21/Sb/SS/WP	-	5	-	765868,166	3829340,83	0
	Face Plate	FP	B2/SB-F/TF/Fr21/Sb/SS/FP	80	8		640	0	0
B. Sub Block Transversal Bulkhead	S-TB/		B2/S-TB/						
B.1 Bulkhead Frame 22	Fr22/		B2/S-TB/Fr22/						
	P/		B2/S-TB/Fr22/P/						
B.1.1 Plate Bulkhead	Plate Bar	1	B2/S-TB/Fr22/P/1	-	5	-	529686,482	2648432,41	0
		2	B2/S-TB/Fr22/P/2	-	5	-	6665454,96	33327274,8	0
		3	B2/S-TB/Fr22/P/3	-	5	-	781791,04	3908955,2	0
		4	B2/S-TB/Fr22/P/4	-	5	-	9810268,92	49051344,6	0
		5	B2/S-TB/Fr22/P/5	-	5	-	3872580,74	19362903,7	0
B.1.2 Stiffener Bulkhead	Sf/		B2/S-TB/Fr22/Sf/						
1 Plate Bar	Plate Bar	FB1	B2/S-TB/Fr22/Sf/FB1	90	8	1799,356	720	1295536,32	0
		FB2	B2/S-TB/Fr22/Sf/FB2	90	8	2390	720	1720800	0
		FB3	B2/S-TB/Fr22/Sf/FB3	90	8	2390	720	1720800	0
		FB4	B2/S-TB/Fr22/Sf/FB4	90	8	2390	720	1720800	0
		FB5	B2/S-TB/Fr22/Sf/FB5	90	8	6153,66	720	4430635,2	0
		FB6	B2/S-TB/Fr22/Sf/FB6	90	8	1374	720	989280	0
		FB7	B2/S-TB/Fr22/Sf/FB7	90	8	460	720	331200	0
		FB8	B2/S-TB/Fr22/Sf/FB8	90	8	6153,66	720	4430635,2	0
		Tb1	B2/S-TB/Fr22/Sf/Tb1	100 x 65	6	1072,069	954	1022753,826	0
Tb2	B2/S-TB/Fr22/Sf/Tb2	100 x 65	6	1843,45	954	1758651,3	0		
Tb3	B2/S-TB/Fr22/Sf/Tb3	100 x 65	6	2028,552	954	1935238,608	0		
Tb4	B2/S-TB/Fr22/Sf/Tb4	100 x 65	6	2172,41	954	2072479,14	0		
Tb5	B2/S-TB/Fr22/Sf/Tb5	100 x 65	6	2315,048	954	2208555,792	0		
Tb6	B2/S-TB/Fr22/Sf/Tb6	100 x 65	6	2460,69	954	2347498,26	0		
Tb7	B2/S-TB/Fr22/Sf/Tb7	100 x 65	6	2599,14	954	2479579,56	0		
Tb8	B2/S-TB/Fr22/Sf/Tb8	101 x 65	6	2197	954	2095938	0		
Tb9	B2/S-TB/Fr22/Sf/Tb9	102 x 65	6	2197	954	2095938	0		



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber.		
				Breath (mm)	Thicknes s (mm)						
Stiffener T	T Bar	Tb10	B2/S-TB/Fr22/Sf/Tb10	101 x 65	6	2197	954	2095938	0		
		Tb11	B2/S-TB/Fr22/Sf/Tb11	102 x 65	6	2197	954	2095938	0		
		Tb12	B2/S-TB/Fr22/Sf/Tb12	100 x 65	6	2197	954	2095938	0		
		Tb13	B2/S-TB/Fr22/Sf/Tb13	100 x 65	6	2197	954	2095938	0		
		Tb14	B2/S-TB/Fr22/Sf/Tb14	100 x 65	6	2599,14	954	2479579,56	0		
		Tb15	B2/S-TB/Fr22/Sf/Tb15	100 x 65	6	2460,69	954	2347498,26	0		
		Tb16	B2/S-TB/Fr22/Sf/Tb16	100 x 65	6	2315,048	954	2208555,792	0		
		Tb17	B2/S-TB/Fr22/Sf/Tb17	100 x 65	6	2172,41	954	2072479,14	0		
		Tb18	B2/S-TB/Fr22/Sf/Tb18	100 x 65	6	2028,552	954	1935238,608	0		
		Tb19	B2/S-TB/Fr22/Sf/Tb19	100 x 65	6	1843,45	954	1758651,3	0		
Tb20	B2/S-TB/Fr22/Sf/Tb20	100 x 65	6	1072,069	954	1022753,826	0				
C.	Sub Blok Deck	SB-D/		B2/SB-D/							
C.1	Long Deck Girder	LDG/		B2/SB-D/LDG/							
		CI/		B2/SB-D/LDG/CI/							
	1	Centerline	Bulb Plat	1	B2/SB-D/LDG/CI/1	60	5	4495,64	408,28	1835479,899	0
				2	B2/SB-D/LDG/CI/2	60	5	5760	408,28	2351692,8	0
				3	B2/SB-D/LDG/CI/3	60	5	5760	408,28	2351692,8	0
				4	B2/SB-D/LDG/CI/4	60	5	5760	408,28	2351692,8	0
				5	B2/SB-D/LDG/CI/5	60	5	5760	408,28	2351692,8	0
				6	B2/SB-D/LDG/CI/6	60	5	5760	408,28	2351692,8	0
				7	B2/SB-D/LDG/CI/7	60	5	3360	408,28	1371820,8	0
				8	B2/SB-D/LDG/CI/8	60	5	3360	408,28	1371820,8	0
				9	B2/SB-D/LDG/CI/9	60	5	2094,55	408,28	855162,874	0
			Plate Bar	FB1	B2/SB-D/LDG/CI/1	60	5	415	300	124500	0
	FB2	B2/SB-D/LDG/CI/2		60	5	415	300	124500	0		
	2	Portside	Bulb Plat	Ps/		B2/SB-D/LDG/Ps/					
				1	B2/SB-D/LDG/Ps/1	60	5	5760	408,28	2351692,8	0
				2	B2/SB-D/LDG/Ps/2	60	5	5760	408,28	2351692,8	0
				3	B2/SB-D/LDG/Ps/3	60	5	5760	408,28	2351692,8	0
				4	B2/SB-D/LDG/Ps/4	60	5	5760	408,28	2351692,8	0
				5	B2/SB-D/LDG/Ps/5	60	5	5760	408,28	2351692,8	0
				6	B2/SB-D/LDG/Ps/6	60	5	5760	408,28	2351692,8	0
				7	B2/SB-D/LDG/Ps/7	60	5	3360	408,28	1371820,8	0
				8	B2/SB-D/LDG/Ps/8	60	5	3360	408,28	1371820,8	0
			3	Starboard	Bulb Plat	Sb/		B2/SB-D/LDG/Sb/			
	1	B2/SB-D/LDG/Sb/1				60	5	5760	408,28	2351692,8	0
	2	B2/SB-D/LDG/Sb/2				60	5	5760	408,28	2351692,8	0
	3	B2/SB-D/LDG/Sb/3				60	5	5760	408,28	2351692,8	0
	4	B2/SB-D/LDG/Sb/4				60	5	5760	408,28	2351692,8	0
	5	B2/SB-D/LDG/Sb/5				60	5	5760	408,28	2351692,8	0
	6	B2/SB-D/LDG/Sb/6				60	5	5760	408,28	2351692,8	0
	7	B2/SB-D/LDG/Sb/7			60	5	3360	408,28	1371820,8	0	



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				Breath (mm)	Thicknes s (mm)						
		8	B2/SB-D/LDG/Sb/8	60	5	3360	408,28	1371820,8	0		
Deck Beam	TDB/			B2/SB-D/TDB/							
Transverse Deck Beam Frame 18	Fr18/			B2/SB-D/TDB/Fr18/							
				B2/SB-D/TDB/Fr18/Ci/							
C.2.1	a.	Centerline	Plate	WP	B2/SB-D/TDB/Fr18/Ci/WP	187	5	-	456037,512	2280187,56	0
				FP	B2/SB-D/TDB/Fr18/Ci/FP	60	6	2191,97	360	789109,2	0
	b.	Portside	Plate	Ps/		B2/SB-D/TDB/Fr18/Ps/					
				WP	B2/SB-D/TDB/Fr18/Ps/WP	187	5	-	379970,146	1899850,73	0
				FP	B2/SB-D/TDB/Fr18/Ps/FP	60	6	1872,737	360	674185,32	0
				Sb/		B2/SB-D/TDB/Fr18/Sb/					
c.	Starboard	Plate	WP	B2/SB-D/TDB/Fr18/Sb/WP	187	5	-	379970,146	1899850,73	0	
			FP	B2/SB-D/TDB/Fr18/Sb/FP	60	6	1872,737	360	674185,32	0	
Transverse Deck Beam Frame 19		Fr19/		B2/SB-D/TDB/Fr19/							
C.2.2	a.	Centerline	Ci/		B2/SB-D/TDB/Fr19/Ci/						
			Plate	WP	B2/SB-D/TDB/Fr19/Ci/WP	187	5	-	458301,976	2291509,88	0
	FP	B2/SB-D/TDB/Fr19/Ci/FP		60	6	2376,395	360	855502,2	0		
	b.	Portside	Plate	Ps/		B2/SB-D/TDB/Fr19/Ps/					
				WP	B2/SB-D/TDB/Fr19/Ps/WP	187	5	-	367330,436	1836652,18	0
				FP1	B2/SB-D/TDB/Fr19/Ps/FP1	60	6	1106,195	360	398230,2	0
				FP2	B2/SB-D/TDB/Fr19/Ps/FP2	60	6	261,23	360	94042,8	0
	c.	Starboard	Plate	Sb/		B2/SB-D/TDB/Fr19/Sb/					
				WP	B2/SB-D/TDB/Fr19/Sb/WP	187	5	-	367330,436	1836652,18	0
	FP	B2/SB-D/TDB/Fr19/Sb/FP	60	6	1807,94	360	650858,4	0			
Transverse Deck Beam Frame 20		Fr20/		B2/SB-D/TDB/Fr20/							
C.2.3	a.	Centerline	Ci/		B2/SB-D/TDB/Fr20/Ci/						
			Plate	WP1	B2/SB-D/TDB/Fr20/Ci/WP1	187	5	-	322946,248	1614731,24	0
				FP1	B2/SB-D/TDB/Fr20/Ci/FP1	60	6	1475	360	531000	0
			Plate	WP2	B2/SB-D/TDB/Fr20/Ci/WP2	187	5	-	165467,716	827338,58	0
	FP2	B2/SB-D/TDB/Fr20/Ci/FP2		60	6	753	360	271080	0		
	b.	Portside	Plate	Ps/		B2/SB-D/TDB/Fr20/Ps/					
				WP	B2/SB-D/TDB/Fr20/Ps/WP	187	5	-	367330,436	1836652,18	0
	FP	B2/SB-D/TDB/Fr20/Ps/FP	60	6	1807,94	360	650858,4	0			
	c.	Starboard	Plate	Sb/		B2/SB-D/TDB/Fr20/Sb/					
				WP	B2/SB-D/TDB/Fr20/Sb/WP	187	5	-	367330,436	1836652,18	0
FP	B2/SB-D/TDB/Fr20/Sb/FP	60	6	1807,94	360	650858,4	0				
Transverse Deck Beam Frame 21		Fr21/		B2/SB-D/TDB/Fr21/							
a.	Centerline	Ci/		B2/SB-D/TDB/Fr21/Ci/							
		Plate	WP	B2/SB-D/TDB/Fr21/Ci/WP	187	5	-	322942,874	1614714,37	0	
FP	B2/SB-D/TDB/Fr21/Ci/FP		60	6	1475	360	531000	0			



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				Breath (mm)	Thicknes s (mm)					
Portside	Plate	Ps/	B2/SB-D/TDB/Fr21/Ps/							
		WP	B2/SB-D/TDB/Fr21/Ps/WP	187	5	-	367330,436	1836652,18	0	
		FP	B2/SB-D/TDB/Fr21/Ps/FP	60	6	1807,94	360	650858,4	0	
Starboard	Plate	Sb/	B2/SB-D/TDB/Fr21/Sb/							
		WP	B2/SB-D/TDB/Fr21/Sb/WP	187	5	-	367330,436	1836652,18	0	
		FP	B2/SB-D/TDB/Fr21/Sb/FP	60	6	1807,94	360	650858,4	0	
C.3 Main Deck Plat		MP/	B2/SB-D/MP/							
Plate Main Deck	Plate	1	B2/SB-D/MP/1	-	5	-	1480712,8	7403564	0	
		2	B2/SB-D/MP/2	-	5	-	5364695,24	26823476,2	0	
		3	B2/SB-D/MP/3	-	5	-	11324553,94	56622769,7	0	
		4	B2/SB-D/MP/4	-	5	-	10674067,72	53370338,6	0	
		5	B2/SB-D/MP/5	-	5	-	10402269,38	52011346,9	0	
		6	B2/SB-D/MP/6	-	5	-	7106989,8	35534949	0	
D. Sub Block Longitudinal Construction		SB-LC/	B2/SB-LC/							
D.1 Bottom Longitudinal		B/	B2/SB-LC/B/							
Centerline		CI/	B2/SB-LC/B/CI/							
	a. Keel Plate	Plate Bar	K3	B2/SB-LC/B/CI/K3	150	15	-	861909,0467	12928635,7	0
D.1.1	b. Tank Construction	Web Plate	Tc/	B2/SB-LC/B/CI/Tc/						
			WP1	B2/SB-LC/B/CI/Tc/WP1	-	5	-	1448486,82	7242434,1	0
		WP2	B2/SB-LC/B/CI/Tc/WP2	-	5	-	3118288,66	15591443,3	0	
		Stiffener	FP1	B2/SB-LC/B/CI/Tc/FP1	80	8	3168,903	640	2028097,92	0
			FP2	B2/SB-LC/B/CI/Tc/FP2	80	8	3409,694	640	2182204,16	0
			FP3	B2/SB-LC/B/CI/Tc/FP3	80	8	3631,966	640	2324458,24	0
			FP4	B2/SB-LC/B/CI/Tc/FP4	80	8	3649,85	640	2335904	0
FP5	B2/SB-LC/B/CI/Tc/FP5		80	8	3452,319	640	2209484,16	0		
Portside		Ps/	B2/SB-LC/B/Ps/							
	b. Longitudinal Tank Bulkhead Portside	Web Plate	Bkh/	B2/SB-LC/B/Ps/Bkh/						
WP1			B2/SB-LC/B/Ps/Bkh/WP1	-	5	-	785032,036	3925160,18	0	
		WP2	B2/SB-LC/B/Ps/Bkh/WP2	-	5	-	4997843,82	24989219,1	0	
D.1.2	b. Longitudinal Tank Bulkhead Portside	Stiffener	FP1	B2/SB-LC/B/Ps/Bkh/FP1	90	8	2607,427	720	1877347,44	0
			FP2	B2/SB-LC/B/Ps/Bkh/FP2	90	8	4558,097	720	3281829,84	0
			FP3	B2/SB-LC/B/Ps/Bkh/FP3	90	8	4558,097	720	3281829,84	0
			FP4	B2/SB-LC/B/Ps/Bkh/FP4	90	8	4558,097	720	3281829,84	0
			FP5	B2/SB-LC/B/Ps/Bkh/FP5	90	8	4558,097	720	3281829,84	0
Starboard		Sb/	B2/SB-LC/B/Sb/							
	b. Longitudinal Tank Bulkhead Starboard	Web Plate	Bkh/	B2/SB-LC/B/Sb/Bkh/						
WP1			B2/SB-LC/B/Sb/Bkh/WP1	-	5	-	785032,036	3925160,18	0	
		WP2	B2/SB-LC/B/Sb/Bkh/WP2	-	5	-	4997843,82	24989219,1	0	
D.1.3	b. Longitudinal Tank Bulkhead Starboard	Stiffener	FP1	B2/SB-LC/B/Sb/Bkh/FP1	90	8	2607,427	720	1877347,44	0
			FP2	B2/SB-LC/B/Sb/Bkh/FP2	90	8	4558,097	720	3281829,84	0
			FP3	B2/SB-LC/B/Sb/Bkh/FP3	90	8	4558,097	720	3281829,84	0
			FP4	B2/SB-LC/B/Sb/Bkh/FP4	90	8	4558,097	720	3281829,84	0
			FP5	B2/SB-LC/B/Sb/Bkh/FP5	90	8	4558,097	720	3281829,84	0
D.2 Longitudinal Deck Beam		D/	B2/SB-LC/D/							
Centerline		CI/	B2/SB-LC/D/CI/							



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				Breath (mm)	Thicknes s (mm)							
Deck	Plate Bar	WP	B2/SB-LC/D/Ci/WP	-	8	-	427200	3417600	0			
		FP	B2/SB-LC/D/Ci/FP	120	15	2400	1800	4320000	0			
		Ps/	B2/SB-LC/D/Ps/									
Deck	Plate Bar	WP1	B2/SB-LC/D/Ps/WP1	-	8	-	484536,4863	3876291,89	0			
		WP2	B2/SB-LC/D/Ps/WP2	-	8	-	657714,7138	5261717,71	0			
D.2.2	b.	Deck	Plate Bar	FP1	B2/SB-LC/D/Ps/FP1	120	15	211	1800	379800	0	
				FP2	B2/SB-LC/D/Ps/FP2	120	15	893,848	1800	1608926,4	0	
				FP3	B2/SB-LC/D/Ps/FP3	120	15	1205	1800	2169000	0	
				FP4	B2/SB-LC/D/Ps/FP4	120	15	3695,183	1800	6651329,4	0	
		Sb/	B2/SB-LC/D/Sb/									
D.2.3	a.	Deck	Plate Bar	WP1	B2/SB-LC/D/Sb/WP1	-	8	-	484536,4863	3876291,89	0	
				WP2	B2/SB-LC/D/Sb/WP2	-	8	-	657714,7138	5261717,71	0	
D.2.3	b.	Deck	Plate Bar	FP1	B2/SB-LC/D/Sb/FP1	120	15	211	1800	379800	0	
				FP2	B2/SB-LC/D/Sb/FP2	120	15	893,848	1800	1608926,4	0	
				FP3	B2/SB-LC/D/Sb/FP3	120	15	1205	1800	2169000	0	
				FP4	B2/SB-LC/D/Sb/FP4	120	15	3695,183	1800	6651329,4	0	
		SA-3/	B2/SB-LC/D/SA-3/									
		Ps/	B2/SB-LC/D/SA-3/Ps/									
D.2.4	a.	Deck	Plate Bar	WP	B2/SB-LC/D/SA-3/Ps/WP	-	8	-	417906,8625	3343254,9	0	
				FP	B2/SB-LC/D/SA-3/Ps/FP	100	10	2223,38	1000	2223380	0	
		Sb/	B2/SB-LC/D/SA-3/Sb/									
D.2.4	b.	Deck	Plate Bar	WP	B2/SB-LC/D/SA-3/Sb/WP	-	8	-	417906,8625	3343254,9	0	
				FP	B2/SB-LC/D/SA-3/Sb/FP	100	10	2223,38	1000	2223380	0	
		SB-B/	B2/SB-B/									
E.1			Tank Top Stiffener		TT/Bp/		B2/SB-B/TT/Bp/					
E.1				Bulb Plat	1	B2/SB-B/TT/Bp/1	85	5	4794,75	648,28	3108340,53	0
					2	B2/SB-B/TT/Bp/2	85	5	4794,75	648,28	3108340,53	0
					3	B2/SB-B/TT/Bp/3	85	5	3595	648,28	2330566,6	0
					4	B2/SB-B/TT/Bp/4	85	5	4794,75	648,28	3108340,53	0
					5	B2/SB-B/TT/Bp/5	85	5	4794,75	648,28	3108340,53	0
					6	B2/SB-B/TT/Bp/6	85	5	4794,75	648,28	3108340,53	0
E.2			Tank Top Plate		TT/		B2/SB-B/TT/					
E.2				Plate Bar	P1	B2/SB-B/TT/P1	-	8	-	690600,0738	5524800,59	0
					P2	B2/SB-B/TT/P2	-	8	-	812528,0738	6500224,59	0
					P3	B2/SB-B/TT/P3	-	5	-	8556582,98	42782914,9	0
					P4	B2/SB-B/TT/P4	-	5	-	3626492,14	18132460,7	0
		Sf/	B2/SB-B/TT/Sf/									
E.2				Plate Bar	1	B2/SB-B/TT/Sf/1	80	8	3299,416	640	2111626,24	0
					2	B2/SB-B/TT/Sf/2	80	8	3299,416	640	2111626,24	0
					3	B2/SB-B/TT/Sf/3	75	8	682,41	600	409446	0
					4	B2/SB-B/TT/Sf/4	75	8	682,41	600	409446	0
E.3			Pillar		TT/P/		B2/SB-B/TT/P/					
E.3				Plate Bar	1	B2/SB-B/TT/P/1	-	8	-	34780,38038	278243,043	0
					2	B2/SB-B/TT/P/2	-	8	-	29211,38538	233691,083	0
					3	B2/SB-B/TT/P/3	-	8	-	29211,38538	233691,083	0



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Ber
				Breath (mm)	Thicknes s (mm)				
		TT/Pi/				B2/SB-B/TT/Pi/			
	Pillar	1	B2/SB-B/TT/Pi/1	-	6,35	-	1057859,2	6717405,92	0
		2	B2/SB-B/TT/Pi/2	-	4,5	-	852149,6	3834673,2	0
		3	B2/SB-B/TT/Pi/3	-	4,5	-	852149,6	3834673,2	0
		SB-SS/				B2/SB-SS/			
F.1	Bottom	B/				B2/SB-SS/B/			
	Portside	Ps/				B2/SB-SS/B/Ps/			
F.1.1	Bottom Plate 1	Plate 1	B2/SB-SS/B/Ps/1	-	8	-	5605949,28	44847594,24	0
	Bottom Plate 2	Plate 2	B2/SB-SS/B/Ps/2	-	8	-	9684426,6	77475412,8	0
	Bottom Plate 3	Plate 3	B2/SB-SS/B/Ps/3	-	8	-	4502229,69	36017837,52	0
	Starboard	Sb/				B2/SB-SS/B/Sb/			
F.1.2	Bottom Plate 1	Plate 1	B2/SB-SS/B/Sb/1	-	8	-	5605949,28	44847594,24	0
	Bottom Plate 2	Plate 2	B2/SB-SS/B/Sb/2	-	8	-	9684426,6	77475412,8	0
	Bottom Plate 3	Plate 3	B2/SB-SS/B/Sb/3	-	8	-	4502229,69	36017837,52	0
F.2	Side Shell	S/				B2/SB-SS/S/			
	Portside	Ps/				B2/SB-SS/S/Ps/			
F.2.1	Side Shell Plate 1	Plate 1	B2/SB-SS/S/Ps/1	-	6	-	8428388,85	50570333,1	0
	Side Shell Plate 2	Plate 2	B2/SB-SS/S/Ps/2	-	6	-	4493929,867	26963579,2	0
	Starboard	Sb/				B2/SB-SS/S/Sb/			
F.2.2	Side Shell Plate 1	Plate 1	B2/SB-SS/S/Sb/1	-	6	-	8428388,85	50570333,1	0
	Side Shell Plate 2	Plate 2	B2/SB-SS/S/Sb/2	-	6	-	4493929,867	26963579,2	0

Blok



Transverse Bottom F 18

B2/TT-BTF18/

Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm)
Bracket	Plate	Bracket/	B2/TT-BTF18/Bracket/1	-	5	224,865		49942,1682
Bracket	Plate	Bracket/	B2/TT-BTF18/Bracket/2	-	5	224,865		49942,1682
Bracket	Plate	Bracket/	B2/TT-BTF18/Bracket/3	-	5	224,865		49942,1682
Bracket	Plate	Bracket/	B2/TT-BTF18/Bracket/4	-	5	224,865		49942,1682
Bracket	Plate	Bracket/	B2/TT-BTF18/Bracket/5	-	5	224,865		49942,1682

Longitudinal Tank Bulkhead Portside Transverse Bottom F 1 B2/LCBkh-BTF18/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm)
1	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/1	-	5	300		65313,6499
2	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/2	-	5	300		65313,6499
3	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/3	-	5	300		65313,6499
4	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/4	-	5	300		65313,6499
5	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/5	-	5	300		65313,6499

Main Deck Bracket Long Stiffener

B2/MD-LDG/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm)
1	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/1	-	5	266,548		418276,293
2	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/2	-	5	266,548		418276,293
3	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/3	-	5	266,548		418276,293
4	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/4	-	5	266,548		418276,293
5	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/5	-	5	266,548		418276,293
6	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/6	-	5	266,548		418276,293
7	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/7	-	5	266,548		418276,293
8	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/8	-	5	266,548		418276,293
9	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/9	-	5	266,548		418276,293
10	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/10	-	5	266,548		418276,293
11	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/11	-	5	266,548		418276,293
12	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/12	-	5	266,548		418276,293
13	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/13	-	5	266,548		418276,293
14	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/14	-	5	266,548		418276,293
15	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/15	-	5	266,548		418276,293
16	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/16	-	5	266,548		418276,293
17	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/17	-	5	266,548		418276,293
18	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/18	-	5	266,548		418276,293
19	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/19	-	5	266,548		418276,293
20	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/20	-	5	266,548		418276,293
21	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/21	-	5	266,548		418276,293
22	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/22	-	5	266,548		418276,293
23	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/23	-	5	266,548		418276,293

Transverse Frame Bracket Long Stiffener

B2/TF-LDG/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm)
1	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/1	-	5	414,099		144575,754
2	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/2	-	5	510,71		184951,589



No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm ³)
1	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/3	-	5	599,299		221863,522
2	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/4	-	5	682,077		256354,516
3	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/5	-	5	414,099		256355,516
4	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/6	-	5	510,71		256356,516
5	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/7	-	5	599,299		256357,516
6	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/8	-	5	682,077		256358,516

Bracket Frame 17

B2/MD-TBF17/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm ³)
	Flat Bar	Plate	Flat Bar	B2/MD-TBF17/Flat Bar		8	7945,804	640	5085314,56
1	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/1	-	5	405,665	640	259625,6
2	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/2	-	5	405,665	640	259625,6
3	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/3	-	5	405,665	640	259625,6
4	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/4	-	5	405,665	640	259625,6
5	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/5	-	5	405,665	640	259625,6
6	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/6	-	5	405,665	640	259625,6
7	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/7	-	5	405,665	640	259625,6
8	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/8	-	5	405,665	640	259625,6
9	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/9	-	5	405,665	640	259625,6
10	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/10	-	5	405,665	640	259625,6
11	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/11	-	5	405,665	640	259625,6
12	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/12	-	5	405,665	640	259625,6
13	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/13	-	5	405,665	640	259625,6
14	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/14	-	5	405,665	640	259625,6
15	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/15	-	5	405,665	640	259625,6
16	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/16	-	5	405,665	640	259625,6
17	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/17	-	5	405,665	640	259625,6
18	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/18	-	5	405,665	640	259625,6
19	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/19	-	5	405,665	640	259625,6
20	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/20	-	5	405,665	640	259625,6
21	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/21	-	5	405,665	640	259625,6
22	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/22	-	5	405,665	640	259625,6
23	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/23	-	5	405,665	640	259625,6

B2/Ps/Fr17/LF/B/

Frame 17 to Long Stiffener Side Shell

B2/Ps/Fr17/LF/S/

Portside and Starboard

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)
1	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/1	-	5	300		65313,6499
2	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/2	-	5	300		65313,6499
3	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/3	-	5	300		65313,6499
4	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/4	-	5	300		65313,6499
5	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/5	-	5	300		65313,6499
6	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/6	-	5	300		65313,6499
7	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/7	-	5	300		65313,6499
8	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/8	-	5	300		65313,6499
9	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/9	-	5	300		65313,6499
10	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/10	-	5	300		65313,6499
11	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/11	-	5	300		65313,6499



	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm ³)
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/12	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/13	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/14	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/15	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/16	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/17	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/18	-	5	300		65313,6499
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/19	-	5	300		65313,6499
20	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/20	-	5	300		65313,6499
21	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/21	-	5	300		65313,6499
22	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/22	-	5	300		65313,6499
23	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/23	-	5	300		65313,6499

B2/Fr22/LF/B/

Frame 22 to Long Stiffener Side Shell

B2/Fr22/LF/SS

Portside and Starboard

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)
1	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/1	-	5	662,997		65313,6499
2	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/2	-	5	558,859		65313,6499
3	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/3	-	5	437,665		65313,6499
4	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/4	-	5	437,665		65313,6499
5	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/5	-	5	400,564		65313,6499
6	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/6	-	5	356,777		65313,6499
7	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/7	-	5	356,777		65313,6499
8	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/8	-	5	356,777		65313,6499
9	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/9	-	5	356,777		65313,6499
10	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/10	-	5	356,777		65313,6499
11	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/11	-	5	356,777		65313,6499
12	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/12	-	5	356,777		65313,6499
13	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/13	-	5	410,376		65313,6499
14	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/14	-	5	410,376		65313,6499
15	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/15	-	5	410,376		65313,6499
16	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/16	-	5	410,376		65313,6499
17	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/17	-	5	410,376		65313,6499
18	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/18	-	5	410,376		65313,6499
19	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/19	-	5	410,376		65313,6499

Blok



Transverse Bottom F 18

B2/TT-BTF18/

Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mr)	Berat (
acket	Plate	Bracket/	B2/TT-BTF18/Bracket/1	-	5	224,865		49942,1682	0
acket	Plate	Bracket/	B2/TT-BTF18/Bracket/2	-	5	224,865		49942,1682	0
acket	Plate	Bracket/	B2/TT-BTF18/Bracket/3	-	5	224,865		49942,1682	0
acket	Plate	Bracket/	B2/TT-BTF18/Bracket/4	-	5	224,865		49942,1682	0
acket	Plate	Bracket/	B2/TT-BTF18/Bracket/5	-	5	224,865		49942,1682	0

Longitudinal Tank Bulkhead Portside Transverse Bottom F 1 B2/LCBkh-BTF18/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mr)	Berat (
1	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/1	-	5	300		65313,6499	0
2	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/2	-	5	300		65313,6499	0
3	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/3	-	5	300		65313,6499	0
4	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/4	-	5	300		65313,6499	0
5	Bracket	Plate	Bracket/	B2/LCBkh-BTF18/Bracket/5	-	5	300		65313,6499	0

Main Deck Bracket Long Stiffener

B2/MD-LDG/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mr)	Berat (
1	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/1	-	5	266,548		418276,293	0
2	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/2	-	5	266,548		418276,293	0
3	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/3	-	5	266,548		418276,293	0
4	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/4	-	5	266,548		418276,293	0
5	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/5	-	5	266,548		418276,293	0
6	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/6	-	5	266,548		418276,293	0
7	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/7	-	5	266,548		418276,293	0
8	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/8	-	5	266,548		418276,293	0
9	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/9	-	5	266,548		418276,293	0
10	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/10	-	5	266,548		418276,293	0
11	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/11	-	5	266,548		418276,293	0
12	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/12	-	5	266,548		418276,293	0
13	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/13	-	5	266,548		418276,293	0
14	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/14	-	5	266,548		418276,293	0
15	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/15	-	5	266,548		418276,293	0
16	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/16	-	5	266,548		418276,293	0
17	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/17	-	5	266,548		418276,293	0
18	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/18	-	5	266,548		418276,293	0
19	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/19	-	5	266,548		418276,293	0
20	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/20	-	5	266,548		418276,293	0
21	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/21	-	5	266,548		418276,293	0
22	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/22	-	5	266,548		418276,293	0
23	Bracket	Plate	Bracket/	B2/MD-LDG/Bracket/23	-	5	266,548		418276,293	0

Transverse Frame Bracket Long Stiffener

B2/TF-LDG/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mr)	Berat (
1	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/1	-	5	414,099		144575,754	0
2	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/2	-	5	510,71		184951,589	0



No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm ³)	Berat (kg)
1	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/3	-	5	599,299		221863,522	0
2	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/4	-	5	682,077		256354,516	0
3	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/5	-	5	414,099		256355,516	0
4	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/6	-	5	510,71		256356,516	0
5	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/7	-	5	599,299		256357,516	0
6	Bracket	Plate	Bracket/	B2/TF-LDG/Bracket/8	-	5	682,077		256358,516	0

Bracket Frame 17

B2/MD-TBF17/

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm ³)	Berat (kg)
	Flat Bar	Plate	Flat Bar	B2/MD-TBF17/Flat Bar		8	7945,804	640	5085314,56	0
1	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/1	-	5	405,665	640	259625,6	0
2	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/2	-	5	405,665	640	259625,6	0
3	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/3	-	5	405,665	640	259625,6	0
4	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/4	-	5	405,665	640	259625,6	0
5	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/5	-	5	405,665	640	259625,6	0
6	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/6	-	5	405,665	640	259625,6	0
7	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/7	-	5	405,665	640	259625,6	0
8	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/8	-	5	405,665	640	259625,6	0
9	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/9	-	5	405,665	640	259625,6	0
10	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/10	-	5	405,665	640	259625,6	0
11	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/11	-	5	405,665	640	259625,6	0
12	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/12	-	5	405,665	640	259625,6	0
13	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/13	-	5	405,665	640	259625,6	0
14	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/14	-	5	405,665	640	259625,6	0
15	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/15	-	5	405,665	640	259625,6	0
16	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/16	-	5	405,665	640	259625,6	0
17	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/17	-	5	405,665	640	259625,6	0
18	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/18	-	5	405,665	640	259625,6	0
19	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/19	-	5	405,665	640	259625,6	0
20	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/20	-	5	405,665	640	259625,6	0
21	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/21	-	5	405,665	640	259625,6	0
22	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/22	-	5	405,665	640	259625,6	0
23	Bracket	Plate	Bracket/	B2/MD-TBF17/Bracket/23	-	5	405,665	640	259625,6	0

B2/Ps/Fr17/LF/B/

Frame 17 to Long Stiffener Side Shell

B2/Ps/Fr17/LF/S/

Portside and Starboard

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (kg)
1	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/1	-	5	300		65313,6499	0
2	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/2	-	5	300		65313,6499	0
3	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/3	-	5	300		65313,6499	0
4	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/4	-	5	300		65313,6499	0
5	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/5	-	5	300		65313,6499	0
6	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/6	-	5	300		65313,6499	0
7	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/7	-	5	300		65313,6499	0
8	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/8	-	5	300		65313,6499	0
9	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/9	-	5	300		65313,6499	0
10	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/10	-	5	300		65313,6499	0
11	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/11	-	5	300		65313,6499	0



	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Luas Penampang	Volume Profil (mm ³)	Berat (kg)
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/12	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/B/Bracket/13	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/14	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/15	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/16	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/17	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/18	-	5	300		65313,6499	0
	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/19	-	5	300		65313,6499	0
20	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/20	-	5	300		65313,6499	0
21	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/21	-	5	300		65313,6499	0
22	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/22	-	5	300		65313,6499	0
23	Bracket	Plate	Bracket/	B2/Ps/Fr17/LF/SS/Bracket/23	-	5	300		65313,6499	0

B2/Fr22/LF/B/

Frame 22 to Long Stiffener Side Shell

B2/Fr22/LF/SS

Portside and Starboard

No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (kg)
1	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/1	-	5	662,997		65313,6499	0
2	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/2	-	5	558,859		65313,6499	0
3	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/3	-	5	437,665		65313,6499	0
4	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/4	-	5	437,665		65313,6499	0
5	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/5	-	5	400,564		65313,6499	0
6	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/6	-	5	356,777		65313,6499	0
7	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/7	-	5	356,777		65313,6499	0
8	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/8	-	5	356,777		65313,6499	0
9	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/9	-	5	356,777		65313,6499	0
10	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/10	-	5	356,777		65313,6499	0
11	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/11	-	5	356,777		65313,6499	0
12	Bracket	Plate	Bracket/	B2/Fr22/LF/B/Bracket/12	-	5	356,777		65313,6499	0
13	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/13	-	5	410,376		65313,6499	0
14	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/14	-	5	410,376		65313,6499	0
15	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/15	-	5	410,376		65313,6499	0
16	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/16	-	5	410,376		65313,6499	0
17	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/17	-	5	410,376		65313,6499	0
18	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/18	-	5	410,376		65313,6499	0
19	Bracket	Plate	Bracket/	B2/Fr22/LF/SS/Bracket/19	-	5	410,376		65313,6499	0



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
		SB-F/				B3/SB-F/				
		SB-F/				B3/SB-F/				
Portside		LF/B/				B3/SB-F/LF/B/				
Bottom Portside		Ps/				B3/SB-F/LF/B/Ps/				
1			1	B3/SB-F/LF/B/Ps/1	100x65	6	2400	954	2289600	0,0062
2			2	B3/SB-F/LF/B/Ps/2	100x65	6	6601	954	6297354	0,0171
3	LFP 3		3	B3/SB-F/LF/B/Ps/3	100x65	6	6601	954	6297354	0,0171
4	LFP 4		4	B3/SB-F/LF/B/Ps/4	100x65	6	6601	954	6297354	0,0171
5	LFP 5		5	B3/SB-F/LF/B/Ps/5	100x65	6	6601	954	6297354	0,0171
6	LFP 6		6	B3/SB-F/LF/B/Ps/6	100x65	6	6601	954	6297354	0,0171
7	LFP 7		7	B3/SB-F/LF/B/Ps/7	100x65	6	6601	954	6297354	0,0171
8	LFP 8		8	B3/SB-F/LF/B/Ps/8	100x65	6	6601	954	6297354	0,0171
9	LFP 9		9	B3/SB-F/LF/B/Ps/9	100x65	6	6601	954	6297354	0,0171
10	LFP 10		10	B3/SB-F/LF/B/Ps/10	100x65	6	6035,29	954	5757666,66	0,0157
11	LFP 11		11	B3/SB-F/LF/B/Ps/11	100x65	6	2410,41	954	2299531,14	0,0063
	Long Frame Side Shell Portside	LF/Ss1/Ps/								
1	LF/Ps/Ss1		1	B3/SB-F/LF/Ss1/Ps/1	85	5	6660	648,28	4317544,8	0,0118
2	LF/Ps/Ss2		2	B3/SB-F/LF/Ss1/Ps/2	85	5	6660	648,28	4317544,8	0,0118
3	LF/Ps/Ss3		3	B3/SB-F/LF/Ss1/Ps/3	85	5	6660	648,28	4317544,8	0,0118
4	LF/Ps/Ss4		4	B3/SB-F/LF/Ss1/Ps/4	85	5	6660	648,28	4317544,8	0,0118
5	LF/Ps/Ss5		5	B3/SB-F/LF/Ss1/Ps/5	85	5	6660	648,28	4317544,8	0,0118
6	LF/Ps/Ss6		6	B3/SB-F/LF/Ss1/Ps/6	85	5	6660	648,28	4317544,8	0,0118
7	LF/Ps/Ss7		7	B3/SB-F/LF/Ss1/Ps/7	85	5	6660	648,28	4317544,8	0,0118
8	LF/Ps/Ss8		8	B3/SB-F/LF/Ss1/Ps/8	85	5	3600	648,28	2333808	0,0064
9	LF/Ps/Ss9		9	B3/SB-F/LF/Ss1/Ps/9	85	5	6603	648,28	4280592,84	0,0117
	Long Frame Bottom Starboard	Sb/								
1	LFP 1		1	B3/SB-F/LF/B/Sb/1	100x65	6	2400	954	2289600	0,0062
2	LFP 2		2	B3/SB-F/LF/B/Sb/2	100x65	6	6601	954	6297354	0,0171
3	LFP 3		3	B3/SB-F/LF/B/Sb/3	100x65	6	6601	954	6297354	0,0171
4	LFP 4		4	B3/SB-F/LF/B/Sb/4	100x65	6	6601	954	6297354	0,0171
5	LFP 5		5	B3/SB-F/LF/B/Sb/5	100x65	6	6601	954	6297354	0,0171
6	LFP 6		6	B3/SB-F/LF/B/Sb/6	100x65	6	6601	954	6297354	0,0171
7	LFP 7		7	B3/SB-F/LF/B/Sb/7	100x65	6	6601	954	6297354	0,0171
8	LFP 8		8	B3/SB-F/LF/B/Sb/8	100x65	6	6601	954	6297354	0,0171
9	LFP 9		9	B3/SB-F/LF/B/Sb/9	100x65	6	6601	954	6297354	0,0171
10	LFP 10		10	B3/SB-F/LF/B/Sb/10	100x65	6	6035,29	954	5757666,66	0,0157
11	LFP 11		11	B3/SB-F/LF/B/Sb/11	100x65	6	2410,41	954	2299531,14	0,0063
	Long Frame Side Shell Starboard	LF/Ss1/Sb/								
1	LF/Ps/Ss1		1	B3/SB-F/LF/Ss1/Sb/1	85	5	6660	648,28	4317544,8	0,0118
2	LF/Ps/Ss2		2	B3/SB-F/LF/Ss1/Sb/2	85	5	6660	648,28	4317544,8	0,0118
3	LF/Ps/Ss3		3	B3/SB-F/LF/Ss1/Sb/3	85	5	6660	648,28	4317544,8	0,0118
4	LF/Ps/Ss4		4	B3/SB-F/LF/Ss1/Sb/4	85	5	6660	648,28	4317544,8	0,0118
5	LF/Ps/Ss5		5	B3/SB-F/LF/Ss1/Sb/5	85	5	6660	648,28	4317544,8	0,0118
6	LF/Ps/Ss6		6	B3/SB-F/LF/Ss1/Sb/6	85	5	6660	648,28	4317544,8	0,0118
7	LF/Ps/Ss7		7	B3/SB-F/LF/Ss1/Sb/7	85	5	6660	648,28	4317544,8	0,0118
8	LF/Ps/Ss8		8	B3/SB-F/LF/Ss1/Sb/8	85	5	3600	648,28	2333808	0,0064
	Transverse Frame	TF/								
	Transverse Frame 23	Fr23/								

A.1



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)			
				Breath (mm)	Thickness (mm)							
A.2.1	Section A	side	Ps/	B3/SB-F/TF/Fr23/Ps/								
		om	B/	B3/SB-F/TF/Fr23/Ps/B/								
			SA/	B3/SB-F/TF/Fr23/Ps/B/SA/								
		Plate Bar	P	B3/SB-F/TF/Fr23/Ps/B/SA/P	-	5	-	887773,812	4438869,06	0,0121		
	Stiffener	S1	B3/SB-F/TF/Fr23/Ps/B/SA/S1	80	8	1359,373	640	869998,72	0,0024			
		S2	B3/SB-F/TF/Fr23/Ps/B/SA/S2	80	8	969,73	640	620627,2	0,0017			
		S3	B3/SB-F/TF/Fr23/Ps/B/SA/S3	80	8	540,12	640	345676,8	0,0009			
		S4	B3/SB-F/TF/Fr23/Ps/B/SA/S4	80	8	1102,17	640	705388,8	0,0019			
	b.	Section B	SB/	B3/SB-F/TF/Fr23/Ps/B/SB/								
			Plate Bar	P	B3/SB-F/TF/Fr23/Ps/B/SB/P	-	5	-	748094,62	3740473,1	0,0102	
Stiffener			S1	B3/SB-F/TF/Fr23/Ps/B/SB/S1	80	8	716,916	640	458826,24	0,0012		
			S2	B3/SB-F/TF/Fr23/Ps/B/SB/S2	80	8	316,03	640	202259,2	0,0006		
	S3	B3/SB-F/TF/Fr23/Ps/B/SB/S3	80	8	634,02	640	405772,8	0,0011				
c.	Frame Side Shell	SS/	B3/SB-F/TF/Fr23/Ps/SS/									
		Plate Bar	WP	B3/SB-F/TF/Fr23/Ps/SS/WP	-	5	-	760492,444	3802462,22	0,0104		
		Plate Bar	FP	B3/SB-F/TF/Fr23/Ps/SS/FP	80	8	4119,34	640	2636377,6	0,0072		
		Starboard	Sb/	B3/SB-F/TF/Fr23/Sb/								
A.2.2	v	Bottom	B/	B3/SB-F/TF/Fr23/Sb/B/								
			SA/	B3/SB-F/TF/Fr23/Sb/B/SA/								
		Plate Bar	P	B3/SB-F/TF/Fr23/Sb/B/SA/P	-	5	-	887773,812	4438869,06	0,0121		
		Stiffener	S1	B3/SB-F/TF/Fr23/Sb/B/SA/S1	80	8	1359,373	640	869998,72	0,0024		
	S2		B3/SB-F/TF/Fr23/Sb/B/SA/S2	80	8	969,73	640	620627,2	0,0017			
	S3		B3/SB-F/TF/Fr23/Sb/B/SA/S3	80	8	540,12	640	345676,8	0,0009			
	S4		B3/SB-F/TF/Fr23/Sb/B/SA/S4	80	8	1102,17	640	705388,8	0,0019			
	b.	Section B	SB/	B3/SB-F/TF/Fr23/Sb/B/SB/								
			Plate Bar	P	B3/SB-F/TF/Fr23/Sb/B/SB/P	-	5	-	748094,62	3740473,1	0,0102	
			Stiffener	S1	B3/SB-F/TF/Fr23/Sb/B/SB/S1	80	8	716,916	640	458826,24	0,0012	
S2				B3/SB-F/TF/Fr23/Sb/B/SB/S2	80	8	316,03	640	202259,2	0,0006		
S3	B3/SB-F/TF/Fr23/Sb/B/SB/S3	80		8	634,02	640	405772,8	0,0011				
c.	Frame Side Shell	SS/	B3/SB-F/TF/Fr23/Sb/SS/									
		Plate Bar	WP	B3/SB-F/TF/Fr23/Sb/SS/WP	-	5	-	760492,444	3802462,22	0,0104		
		Plate Bar	FP	B3/SB-F/TF/Fr23/Sb/SS/FP	80	8	4119,34	640	2636377,6	0,0072		
		1	Transverse Frame 24	TF/Fr24/	B3/SB-F/TF/Fr24/							
Centerline	CI/B/			B3/SB-F/TF/Fr24/CI/B/								
Bottom	Plate Bar			P	B3/SB-F/TF/Fr24/CI/B/P	-	5	-	4237313,14	21186565,7	0,0577	
	Stiffener			Paite Bar	S1	B3/SB-F/TF/Fr24/CI/B/S1	90	8	2387,818	720	1719228,96	0,0047
					S2	B3/SB-F/TF/Fr24/CI/B/S2	90	8	2387,818	720	1719228,96	0,0047
					S3	B3/SB-F/TF/Fr24/CI/B/S3	90	8	2387,818	720	1719228,96	0,0047
S4		B3/SB-F/TF/Fr24/CI/B/S4	90		8	2387,818	720	1719228,96	0,0047			
2	Portside	Ps/	B3/SB-F/TF/Fr24/Ps/									
		B/	B3/SB-F/TF/Fr24/Ps/B/									
		Stiffener	Plate Bar	S1	B3/SB-F/TF/Fr24/Ps/B/S1	50	5	345,8	250	86450	0,0002	
				S2	B3/SB-F/TF/Fr24/Ps/B/S2	50	5	345,8	250	86450	0,0002	
				S3	B3/SB-F/TF/Fr24/Ps/B/S3	50	5	495,53	250	123882,5	0,0003	
		b.	Frame Side Shell	SS/	B3/SB-F/TF/Fr24/Ps/SS/							
Web Plate	WP			B3/SB-F/TF/Fr24/Ps/SS/WP	-	5	-	741929,48	3709647,4	0,0101		



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)
				Breath (mm)	Thickness (mm)				
Frame Side Shell	Face Plate	FP	B3/SB-F/TF/Fr24/Ps/SS/FP	80	8	4013,063	640	2568360,32	0,0070
board	Sb/					B3/SB-F/TF/Fr24/Sb/			
	B/					B3/SB-F/TF/Fr24/Sb/B/			
Stiffener	Plate Bar	S1	B3/SB-F/TF/Fr24/Sb/B/S1	50	5	345,8	250	86450	0,0002
		S2	B3/SB-F/TF/Fr24/Sb/B/S2	50	5	345,8	250	86450	0,0002
		S3	B3/SB-F/TF/Fr24/Sb/B/S3	50	5	495,53	250	123882,5	0,0003
Side Shell		SS/				B3/SB-F/TF/Fr24/Sb/SS/			
b. Frame Side Shell	Web Plate	WP	B3/SB-F/TF/Fr24/Sb/SS/WP	-	5	-	741929,48	3709647,4	0,0101
	Face Plate	FP	B3/SB-F/TF/Fr24/Sb/SS/FP	80	8	4013,063	640	2568360,32	0,0070
Transverse Frame 25		TF/Fr25/				B3/SB-F/TF/Fr25/			
1 Portside		Ps/				B3/SB-F/TF/Fr25/Ps/			
a. Bottom	Plate Bar	WP	B3/SB-F/TF/Fr25/Ps/B/WP	-	5	-	1102436,178	5512180,89	0,0150
		FP1	B3/SB-F/TF/Fr25/Ps/B/FP1	80	8	2621,508	640	1677765,12	0,0046
		FP2	B3/SB-F/TF/Fr25/Ps/B/FP2	-	5	1524,034	118257,1012	591285,506	0,0016
	Stiffener	S1	B3/SB-F/TF/Fr25/Ps/B/S1	60	6	708,12	360	254923,2	0,0007
		S2	B3/SB-F/TF/Fr25/Ps/B/S2	60	6	417,51	360	150303,6	0,0004
		S3	B3/SB-F/TF/Fr25/Ps/B/S3	60	6	420,28	360	151300,8	0,0004
	b. Side Shell		SS/				B3/SB-F/TF/Fr25/Ps/SS/		
Plate Bar		WP	B3/SB-F/TF/Fr25/Ps/SS/WP	-	6	-	961457,09	5768742,54	0,0157
c. Pillar	Plate Bar	FP	B3/SB-F/TF/Fr25/Ps/SS/FP	120	12	3558,977	1440	5124926,88	0,0140
	Pillar	Pi	B3/SB-F/TF/Fr25/Ps/SS/Pi	-	6	-	839953,43	5039720,58	0,0137
Transverse Frame 25		B/				B3/SB-F/TF/Fr25/Sb/B/			
a. Bottom	Plate Bar	WP	B3/SB-F/TF/Fr25/Sb/B/WP	-	5	-	1102436,178	5512180,89	0,0150
		FP1	B3/SB-F/TF/Fr25/Sb/B/FP1	80	8	2621,508	640	1677765,12	0,0046
		FP2	B3/SB-F/TF/Fr25/Sb/B/FP2	-	5	-	118257,1012	591285,506	0,0016
	Stiffener	S1	B3/SB-F/TF/Fr25/Sb/B/S1	60	6	708,12	360	254923,2	0,0007
		S2	B3/SB-F/TF/Fr25/Sb/B/S2	60	6	417,51	360	150303,6	0,0004
		S4	B3/SB-F/TF/Fr25/Sb/B/S4	-	5	-	118257,1012	591285,506	0,0016
	b. Side Shell		SS/				B3/SB-F/TF/Fr25/Sb/SS/		
Plate Bar		WP	B3/SB-F/TF/Fr25/Sb/SS/WP	-	6	-	961457,09	5768742,54	0,0157
c. Pillar	Plate Bar	FP	B3/SB-F/TF/Fr25/Sb/SS/FP	120	12	3558,977	1440	5124926,88	0,0140
	Pillar	Pi	B3/SB-F/TF/Fr25/Ps/SS/Pi	-	6	-	839953,43	5039720,58	0,0137
Transverse Frame 26		TF/Fr26/				B3/SB-F/TF/Fr26/			
1 Portside		Ps/				B3/SB-F/TF/Fr26/Ps/			
a. Bottom	Plate Bar	WP	B3/SB-F/TF/Fr26/Ps/B/WP	-	5	-	970875,51	4854377,55	0,0132
		FP1	B3/SB-F/TF/Fr26/Ps/B/FP1	80	8	2786,303	640	1783233,92	0,0049
		S1	B3/SB-F/TF/Fr26/Ps/B/S1	50	5	123,19	250	30797,5	0,0001
	Stiffener	S2	B3/SB-F/TF/Fr26/Ps/B/S2	50	5	139,18	250	34795	0,0001
		S3	B3/SB-F/TF/Fr26/Ps/B/S3	50	5	345,759	250	86439,75	0,0002
		S4	B3/SB-F/TF/Fr26/Ps/B/S4	50	5	233,619	250	58404,75	0,0002
		S5	B3/SB-F/TF/Fr26/Ps/B/S5	50	5	199,606	250	49901,5	0,0001
	Side Shell		SS/				B3/SB-F/TF/Fr26/Ps/SS/		

A.2

A.2.3



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
Frame Side Shell	Plate Bar	WP	B3/SB-F/TF/Fr26/Ps/SS/WP	-	6	-	1136013,98	6816083,88	0,0186	
	Plate Bar	FP	B3/SB-F/TF/Fr26/Ps/SS/FP	120	12	3451,03	1440	4969483,2	0,0135	
board	Sb/		B3/SB-F/TF/Fr26/Sb/							
	B/		B3/SB-F/TF/Fr26/Sb/B/							
a. Bottom	Plate Bar	WP	B3/SB-F/TF/Fr26/Sb/B/WP	-	5	-	970875,51	4854377,55	0,0132	
		FP1	B3/SB-F/TF/Fr26/Sb/B/FP1	80	8	2786,303	640	1783233,92	0,0049	
		FP2	B3/SB-F/TF/Fr26/Sb/B/FP2	80	8	1316,65	640	842656	0,0023	
	Stiffener	S1	B3/SB-F/TF/Fr26/Sb/B/S1	50	5	123,19	250	30797,5	0,0001	
		S2	B3/SB-F/TF/Fr26/Sb/B/S2	50	5	139,18	250	34795	0,0001	
		S3	B3/SB-F/TF/Fr26/Sb/B/S3	50	5	345,759	250	86439,75	0,0002	
		S4	B3/SB-F/TF/Fr26/Sb/B/S4	50	5	233,619	250	58404,75	0,0002	
		S5	B3/SB-F/TF/Fr26/Sb/B/S5	50	5	199,606	250	49901,5	0,0001	
	b. Side Shell	SS/		B3/SB-F/TF/Fr26/Sb/SS/						
Frame Side Shell	Plate Bar	WP	B3/SB-F/TF/Fr26/Ps/SS/WP	-	6	-	1136013,98	6816083,88	0,0186	
	Plate Bar	FP	B3/SB-F/TF/Fr26/Ps/SS/FP	120	12	3451,03	1440	4969483,2	0,0135	
Transverse Frame 27		TF/Fr27/		B3/SB-F/TF/Fr27/						
1	Portside	Ps/		B3/SB-F/TF/Fr27/Ps/						
a. Bottom	Plate Bar	B/		B3/SB-F/TF/Fr27/Ps/B/						
		WP	B3/SB-F/TF/Fr27/Ps/B/WP	-	5	-	846476,508	4232382,54	0,0115	
		FP1	B3/SB-F/TF/Fr27/Ps/B/FP1	80	8	2386,611	640	1527431,04	0,0042	
	FP2	B3/SB-F/TF/Fr27/Ps/B/FP2	80	8	1015,775	640	650096	0,0018		
	Stiffener	S1	B3/SB-F/TF/Fr27/Ps/B/S1	50	5	425,265	250	106316,25	0,0003	
		S2	B3/SB-F/TF/Fr27/Ps/B/S2	50	5	199,505	250	49876,25	0,0001	
b. Side Shell	SS/		B3/SB-F/TF/Fr27/Ps/SS/							
Frame Side Shell	Plate Bar	WP	B3/SB-F/TF/Fr27/Ps/SS/WP	-	6	-	1226755,798	7360534,79	0,0200	
	Plate Bar	FP	B3/SB-F/TF/Fr27/Ps/SS/FP	120	12	3557,719	1440	5123115,36	0,0140	
2 Starboard		Sb/		B3/SB-F/TF/Fr27/Sb/						
a. Bottom	Plate Bar	B/		B3/SB-F/TF/Fr27/Sb/B/						
		WP	B3/SB-F/TF/Fr27/Sb/B/WP	-	5	-	846476,508	4232382,54	0,0115	
		FP1	B3/SB-F/TF/Fr27/Sb/B/FP1	80	8	2386,611	640	1527431,04	0,0042	
	FP2	B3/SB-F/TF/Fr27/Sb/B/FP2	80	8	1015,775	640	650096	0,0018		
	Stiffener	S1	B3/SB-F/TF/Fr27/Sb/B/S1	50	5	425,265	250	106316,25	0,0003	
		S2	B3/SB-F/TF/Fr27/Sb/B/S2	50	5	199,505	250	49876,25	0,0001	
b. Side Shell	SS/		B3/SB-F/TF/Fr27/Sb/SS/							
Frame Side Shell	Plate Bar	WP	B3/SB-F/TF/Fr27/Sb/SS/WP	-	6	-	1226755,798	7360534,79	0,0200	
	Plate Bar	FP	B3/SB-F/TF/Fr27/Sb/SS/FP	120	12	3557,719	1440	5123115,36	0,0140	
Sub Block Transversal Bulkhead		S-TB/		B3/S-TB/						
Bulkhead Frame 27.5		Fr27.5/		B3/S-TB/Fr27.5/						
1	Portside	Ps/		B3/S-TB/Fr27.5/Ps/						
a. Bottom	Plate Bar	B/		B3/S-TB/Fr27.5/Ps/B/						
		WP	B3/S-TB/Fr27.5/Ps/B/WP	-	5	-	2067632,16	10338160,8	0,0282	
		FP1	B3/S-TB/Fr27.5/Ps/B/FP1	80	8	1408,161	640	901223,04	0,0025	
		FP2	B3/S-TB/Fr27.5/Ps/B/FP2	80	8	1408,161	640	901223,04	0,0025	
	FP3	B3/S-TB/Fr27.5/Ps/B/FP3	60	8	1950,213	480	936102,24	0,0025		
b. Side Shell	SS/		B3/S-TB/Fr27.5/Ps/SS/							
	Plate Bar	WP	B3/S-TB/Fr27.5/Ps/SS/WP	-	6	-	1470468,94	8822813,64	0,0240	
	Plate Bar	FP1	B3/S-TB/Fr27.5/Ps/SS/FP1	-	6	-	30615,06967	183690,418	0,0005	
Plate Bar	FP2	B3/S-TB/Fr27.5/Ps/SS/FP2	120	12	3369,932	1440	4852702,08	0,0132		
c. Pillar	Pillar	Pi	B3/S-TB/Fr27.5/Ps/SS/Pi	-	6	-	841100,6267	5046603,76	0,0137	



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)						
				Breath (mm)	Thickness (mm)										
board	Sb/		B3/S-TB/Fr27.5/Sb/			B3/S-TB/Fr27.5/Sb/									
				FP1	B3/S-TB/Fr27.5/Sb/B/FP1					80	8	1408,161	640	901223,04	0,0025
				FP2	B3/S-TB/Fr27.5/Sb/B/FP2					80	8	1408,161	640	901223,04	0,0025
Bottom			B3/S-TB/Fr27.5/Sb/B/FP3	60	8	1950,213	480	936102,24	0,0025						
				SS/		B3/S-TB/Fr27.5/Sb/SS/									
				Plate Bar	WP	B3/S-TB/Fr27.5/Sb/SS/WP	-	6	-	1470468,94	8822813,64	0,0240			
b. Side Shell			B3/S-TB/Fr27.5/Sb/SS/FP1	-	6	-	30615,06967	183690,418	0,0005						
				Plate Bar	FP1	B3/S-TB/Fr27.5/Sb/SS/FP1	-	6	-	841100,6267	5046603,76	0,0137			
c. Pillar		Pillar	Pi	B3/S-TB/Fr27.5/Sb/SS/Pi	-	6	-	841100,6267	5046603,76	0,0137					
3	Plate Bulkhead	P/	B3/S-TB/Fr27.5/P/												
				Plate Bar	1	B3/S-TB/Fr27.5/P/1	-	4	-	2998762,25	11995049	0,0327			
					2	B3/S-TB/Fr27.5/P/2	-	4	-	516042,0775	2064168,31	0,0056			
					3	B3/S-TB/Fr27.5/P/3	-	4	-	516042,0775	2064168,31	0,0056			
4	Stiffener Bulkhead	Sf/	B3/S-TB/Fr27.5/Sf/												
a.	Plate Bar	Plate Bar	B3/S-TB/Fr27.5/Sf/	FB1	B3/S-TB/Fr27.5/Sf/FB1	90	8	875,912	720	630656,64	0,0017				
				FB2	B3/S-TB/Fr27.5/Sf/FB2	90	8	575,437	720	414314,64	0,0011				
				FB3	B3/S-TB/Fr27.5/Sf/FB3	90	8	297,619	720	214285,68	0,0006				
				FB4	B3/S-TB/Fr27.5/Sf/FB4	90	8	875,912	720	630656,64	0,0017				
				FB6	B3/S-TB/Fr27.5/Sf/FB6	90	8	297,619	720	214285,68	0,0006				
b.	Stiffener Bulb Plate	Bulb Plat	B3/S-TB/Fr27.5/Sf/	Bp1	B3/S-TB/Fr27.5/Sf/Bp1	60	5	769,096	408,28	314006,5149	0,0009				
				Bp2	B3/S-TB/Fr27.5/Sf/Bp2	60	5	1123,468	408,28	458689,515	0,0012				
				Bp3	B3/S-TB/Fr27.5/Sf/Bp3	60	5	1473,463	408,28	601585,4736	0,0016				
				Bp4	B3/S-TB/Fr27.5/Sf/Bp4	60	5	1685,164	408,28	688018,7579	0,0019				
				Bp5	B3/S-TB/Fr27.5/Sf/Bp5	60	5	1892,815	408,28	772798,5082	0,0021				
				Bp6	B3/S-TB/Fr27.5/Sf/Bp6	60	5	2112,682	408,28	862565,807	0,0023				
				Bp7	B3/S-TB/Fr27.5/Sf/Bp7	60	5	2197	408,28	896991,16	0,0024				
				Bp8	B3/S-TB/Fr27.5/Sf/Bp8	60	5	2197	408,28	896991,16	0,0024				
				Bp9	B3/S-TB/Fr27.5/Sf/Bp9	60	5	1195	408,28	487894,6	0,0013				
				Bp10	B3/S-TB/Fr27.5/Sf/Bp10	60	5	2197	408,28	896991,16	0,0024				
				Bp11	B3/S-TB/Fr27.5/Sf/Bp11	60	5	2197	408,28	896991,16	0,0024				
				Bp12	B3/S-TB/Fr27.5/Sf/Bp12	60	5	2112,682	408,28	862565,807	0,0023				
				Bp13	B3/S-TB/Fr27.5/Sf/Bp13	60	5	1892,815	408,28	772798,5082	0,0021				
				Bp14	B3/S-TB/Fr27.5/Sf/Bp14	60	5	1685,164	408,28	688018,7579	0,0019				
Bp15	B3/S-TB/Fr27.5/Sf/Bp15	60	5	1473,463	408,28	601585,4736	0,0016								
Bp16	B3/S-TB/Fr27.5/Sf/Bp16	60	5	1123,468	408,28	458689,515	0,0012								
Bp17	B3/S-TB/Fr27.5/Sf/Bp17	60	5	769,096	408,28	314006,5149	0,0009								
Sub Blok Deck	SB-D/	B3/SB-D/													
Long Deck Beam	LDB/	B3/SB-D/LDB/													
Portside	Ps/	B3/SB-D/LDB/Ps/													
Web Plate	WP1	B3/SB-D/LDB/Ps/WP1	134	8	3605,76	1072	3865374,72	0,0105							
			WP2	B3/SB-D/LDB/Ps/WP2	134	8	5997,601	1072	6429428,272	0,0175					



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
I Beam	Face Plate	FB1.1	B3/SB-D/LDB/Ps/FB1.1	120	15	-	52896,51687	793447,753	0,0022	
		FB1.2	B3/SB-D/LDB/Ps/FB1.2	120	15	-	372300,1813	5584502,72	0,0152	
		FB1.3	B3/SB-D/LDB/Ps/FB1.3	120	15	-	56557,37953	848360,693	0,0023	
		FB1.4	B3/SB-D/LDB/Ps/FB1.4	120	15	-	322740	4841100	0,0132	
		FB1.5	B3/SB-D/LDB/Ps/FB1.5	120	15	-	55408,54127	831128,119	0,0023	
		FB1.6	B3/SB-D/LDB/Ps/FB1.6	120	15	-	320100	4801500	0,0131	
		FB1.7	B3/SB-D/LDB/Ps/FB1.7	120	15	-	38954,27173	584314,076	0,0016	
		FB2.1	B3/SB-D/LDB/Ps/FB2.1	120	15	-	52896,51687	793447,753	0,0022	
		FB2.2	B3/SB-D/LDB/Ps/FB2.2	120	15	-	372300,1813	5584502,72	0,0152	
		FB2.3	B3/SB-D/LDB/Ps/FB2.3	120	15	-	56557,37953	848360,693	0,0023	
		FB2.4	B3/SB-D/LDB/Ps/FB2.4	120	15	-	322740	4841100	0,0132	
		FB2.5	B3/SB-D/LDB/Ps/FB2.5	120	15	-	55408,54127	831128,119	0,0023	
		FB2.6	B3/SB-D/LDB/Ps/FB2.6	120	15	-	320100	4801500	0,0131	
		FB2.7	B3/SB-D/LDB/Ps/FB2.7	120	15	-	38954,27173	584314,076	0,0016	
C.1	Starboard	Sb/				B3/SB-D/LDB/Sb/				
I Beam	Web Plate	WP1	B3/SB-D/LDB/Sb/WP1	134	8	3605,76	1072	3865374,72	0,0105	
		WP2	B3/SB-D/LDB/Sb/WP2	134	8	5997,601	1072	6429428,272	0,0175	
	Face Plate	FB1.1	B3/SB-D/LDB/Sb/FB1.1	120	15	-	52896,51687	793447,753	0,0022	
		FB1.2	B3/SB-D/LDB/Sb/FB1.2	120	15	-	372300,1813	5584502,72	0,0152	
		FB1.3	B3/SB-D/LDB/Sb/FB1.3	120	15	-	56557,37953	848360,693	0,0023	
		FB1.4	B3/SB-D/LDB/Sb/FB1.4	120	15	-	322740	4841100	0,0132	
		FB1.5	B3/SB-D/LDB/Sb/FB1.5	120	15	-	55408,54127	831128,119	0,0023	
		FB1.6	B3/SB-D/LDB/Sb/FB1.6	120	15	-	320100	4801500	0,0131	
		FB1.7	B3/SB-D/LDB/Sb/FB1.7	120	15	-	38954,27173	584314,076	0,0016	
		FB2.1	B3/SB-D/LDB/Sb/FB2.1	120	15	-	52896,51687	793447,753	0,0022	
		FB2.2	B3/SB-D/LDB/Sb/FB2.2	120	15	-	372300,1813	5584502,72	0,0152	
		FB2.3	B3/SB-D/LDB/Sb/FB2.3	120	15	-	56557,37953	848360,693	0,0023	
		FB2.4	B3/SB-D/LDB/Sb/FB2.4	120	15	-	322740	4841100	0,0132	
		FB2.5	B3/SB-D/LDB/Sb/FB2.5	120	15	-	55408,54127	831128,119	0,0023	
FB2.6	B3/SB-D/LDB/Sb/FB2.6	120	15	-	320100	4801500	0,0131			
FB2.7	B3/SB-D/LDB/Sb/FB2.7	120	15	-	38954,27173	584314,076	0,0016			
C.2.1	Transverse Deck Beam	TDB/				B3/SB-D/TDB/				
Centerline	Plate	Fr23/				B3/SB-D/TDB/Fr23/				
		CI/				B3/SB-D/TDB/Fr23/CI/				
		WP	B3/SB-D/TDB/Fr23/CI/WP	150	5	-	373180,696	1865903,48	0,0051	
	Plate	FP1	B3/SB-D/TDB/Fr23/CI/FP1	60	6	2163,246	360	778768,56	0,0021	
		FP2	B3/SB-D/TDB/Fr23/CI/FP2	60	6	2400,27	360	864097,2	0,0024	
		Ps/					B3/SB-D/TDB/Fr23/Ps/			
	Plate	WP	B3/SB-D/TDB/Fr23/Ps/WP	187	5	-	311829,142	1559145,71	0,0042	
		FP1	B3/SB-D/TDB/Fr23/Ps/FP1	60	6	1841,532	360	662951,52	0,0018	
		FP2	B3/SB-D/TDB/Fr23/Ps/FP2	60	6	2164,558	360	779240,88	0,0021	
	Starboard	Plate	Sb/				B3/SB-D/TDB/Fr23/Sb/			
			WP	B3/SB-D/TDB/Fr23/Sb/WP	187	5	-	311829,142	1559145,71	0,0042
			FP1	B3/SB-D/TDB/Fr23/Sb/FP1	60	6	1841,532	360	662951,52	0,0018
	FP2	B3/SB-D/TDB/Fr23/Sb/FP2	60	6	2164,558	360	779240,88	0,0021		
	C.2.1	Transverse Deck Beam Frame 24	Fr24/				B3/SB-D/TDB/Fr24/			
Centerline	Plate	CI/				B3/SB-D/TDB/Fr24/CI/				
		WP	B3/SB-D/TDB/Fr24/CI/WP	150	5	-	347415,31	1737076,55	0,0047	
		FP1	B3/SB-D/TDB/Fr24/CI/FP1	60	6	1991,803	360	717049,08	0,0020	



C.

C.2

Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
Portside	Plate	FP2	B3/SB-D/TDB/Fr24/Ci/FP2	60	6	2228,83	360	802378,8	0,0022	
		Ps/				B3/SB-D/TDB/Fr24/Ps/				
		WP	B3/SB-D/TDB/Fr24/Ps/WP	187	5	-	321707,246	1608536,23	0,0044	
		FP1	B3/SB-D/TDB/Fr24/Ps/FP1	60	6	1907,083	360	686549,88	0,0019	
Starboard	Plate	FP2	B3/SB-D/TDB/Fr24/Ps/FP2	60	6	2250,279	360	810100,44	0,0022	
		Sb/				B3/SB-D/TDB/Fr24/Sb/				
		WP	B3/SB-D/TDB/Fr24/Sb/WP	187	5	-	321707,246	1608536,23	0,0044	
		FP1	B3/SB-D/TDB/Fr24/Sb/FP1	60	6	1907,083	360	686549,88	0,0019	
C.2.3	Centerline	Plate	FP2	B3/SB-D/TDB/Fr24/Sb/FP2	60	6	2250,279	360	810100,44	0,0022
			Fr25/				B3/SB-D/TDB/Fr25/			
			Ci/				B3/SB-D/TDB/Fr25/Ci/			
			WP	B3/SB-D/TDB/Fr25/Ci/WP	150	5	-	322682,388	1613411,94	0,0044
	Portside	Plate	FP1	B3/SB-D/TDB/Fr25/Ci/FP1	60	6	1850	360	666000	0,0018
			FP2	B3/SB-D/TDB/Fr25/Ci/FP2	60	6	1850	360	666000	0,0018
			Ps/				B3/SB-D/TDB/Fr25/Ps/			
			WP	B3/SB-D/TDB/Fr25/Ps/WP	187	5	-	314345,188	1571725,94	0,0043
	Starboard	Plate	FP1	B3/SB-D/TDB/Fr25/Ps/FP1	60	6	1896,776	360	682839,36	0,0019
			FP2	B3/SB-D/TDB/Fr25/Ps/FP2	60	6	2218	360	798480	0,0022
			Sb/				B3/SB-D/TDB/Fr25/Sb/			
			WP	B3/SB-D/TDB/Fr25/Sb/WP	187	5	-	314345,188	1571725,94	0,0043
C.2.4	Centerline	Plate	FP1	B3/SB-D/TDB/Fr25/Sb/FP1	60	6	1896,776	360	682839,36	0,0019
			FP2	B3/SB-D/TDB/Fr25/Sb/FP2	60	6	2218	360	798480	0,0022
			Fr26/				B3/SB-D/TDB/Fr26/			
			Ci/				B3/SB-D/TDB/Fr26/Ci/			
	Portside	Plate	WP	B3/SB-D/TDB/Fr26/Ci/WP	150	5	-	323987,874	1619939,37	0,0044
			FP1	B3/SB-D/TDB/Fr26/Ci/FP1	60	6	1850	360	666000	0,0018
			FP2	B3/SB-D/TDB/Fr26/Ci/FP2	60	6	2072	360	745920	0,0020
			Ps/				B3/SB-D/TDB/Fr26/Ps/			
	Starboard	Plate	WP	B3/SB-D/TDB/Fr26/Ps/WP	187	5	-	299003,152	1495015,76	0,0041
			FP1	B3/SB-D/TDB/Fr26/Ps/FP1	60	6	1788,672	360	643921,92	0,0018
			FP2	B3/SB-D/TDB/Fr26/Ps/FP2	60	6	2329	360	838440	0,0023
			Sb/				B3/SB-D/TDB/Fr26/Sb/			
C.2.5	Centerline	Plate	WP	B3/SB-D/TDB/Fr26/Sb/WP	187	5	-	299003,152	1495015,76	0,0041
			FP1	B3/SB-D/TDB/Fr26/Sb/FP1	60	6	1788,672	360	643921,92	0,0018
			FP2	B3/SB-D/TDB/Fr26/Sb/FP2	60	6	2329	360	838440	0,0023
			Fr27/				B3/SB-D/TDB/Fr27/			
	Portside	Plate	WP	B3/SB-D/TDB/Fr27/Ci/WP	150	5	-	323987,874	1619939,37	0,0044
			FP1	B3/SB-D/TDB/Fr27/Ci/FP1	60	6	1850	360	666000	0,0018
			FP2	B3/SB-D/TDB/Fr27/Ci/FP2	60	6	2072	360	745920	0,0020
			Ps/				B3/SB-D/TDB/Fr27/Ps/			
	Starboard	Plate	WP	B3/SB-D/TDB/Fr27/Ps/WP	187	5	-	276395,362	1381976,81	0,0038
			FP1	B3/SB-D/TDB/Fr27/Ps/FP1	60	6	1635,916	360	588929,76	0,0016
			FP2	B3/SB-D/TDB/Fr27/Ps/FP2	60	6	2329	360	838440	0,0023
			Sb/				B3/SB-D/TDB/Fr27/Sb/			
Starboard	Plate	WP	B3/SB-D/TDB/Fr27/Sb/WP	187	5	-	276395,362	1381976,81	0,0038	
		FP1	B3/SB-D/TDB/Fr27/Sb/FP1	60	6	1635,916	360	588929,76	0,0016	
		FP2	B3/SB-D/TDB/Fr27/Sb/FP2	60	6	2329	360	838440	0,0023	
		Fr27.5/				B3/SB-D/TDB/Fr27.5/				



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)		
				Breath (mm)	Thickness (mm)						
Centerline	Plate	CI/	B3/SB-D/TDB/Fr27.5/CI/								
		WP	B3/SB-D/TDB/Fr27.5/CI/ WP	150	5	-	387215,282	1936076,41	0,0053		
		FP1	B3/SB-D/TDB/Fr27.5/CI/ FP1	60	6	1850	360	666000	0,0018		
Portside	Plate	Ps/	B3/SB-D/TDB/Fr27.5/CI/FP2								
		FP2	B3/SB-D/TDB/Fr27.5/CI/FP2	60	6	1814,5	360	653220	0,0018		
		WP	B3/SB-D/TDB/Fr27.5/Ps/ WP	187	5	-	261661,38	1308306,9	0,0036		
Starboard	Plate	FP1	B3/SB-D/TDB/Fr27.5/Ps/FP1	60	6	2214	360	797040	0,0022		
		FP2	B3/SB-D/TDB/Fr27.5/Ps/FP2	60	6	1540,783	360	554681,88	0,0015		
		WP	B3/SB-D/TDB/Fr27.5/Sb/ WP	187	5	-	261661,38	1308306,9	0,0036		
Main Deck Plat	Plate	Sb/	B3/SB-D/TDB/Fr27.5/Sb/								
		FP1	B3/SB-D/TDB/Fr27.5/Sb/FP1	60	6	2214	360	797040	0,0022		
		FP2	B3/SB-D/TDB/Fr27.5/Sb/FP2	60	6	1540,783	360	554681,88	0,0015		
C.3.1	Center	MP/	B3/SB-D/MP/								
		CI/	B3/SB-D/MP/CI/	-	5	-	3003677,53	5355875,9	0,0146		
		Ps/	B3/SB-D/MP/Ps/								
	Portside	Plate	1	B3/SB-D/MP/Ps/1	-	6	-	3003677,53	18022065,18	0,0491	
			2	B3/SB-D/MP/Ps/2	-	6	-	654859,588	3929157,528	0,0107	
			3	B3/SB-D/MP/Ps/3	-	6	-	688067,858	4128407,148	0,0112	
	Starboard	Plate	Sb/	B3/SB-D/MP/Sb/							
			1	B3/SB-D/MP/Sb/1	-	6	-	3003677,53	18022065,18	0,0491	
			2	B3/SB-D/MP/Sb/2	-	6	-	654859,588	3929157,528	0,0107	
C.3.2	Deck Planking T	Dpt/	B3/SB-D/MP/Dpt/								
		1	B3/SB-D/MP/Dpt/1	2/34x2/26x3	2	-	-	33129200,00	0,0902		
		2	B3/SB-D/MP/Dpt/2	2/34x2/26x4	2	-	-	25319510,00	0,0689		
		3	B3/SB-D/MP/Dpt/3	2/34x2/26x5	2	-	-	21695620,00	0,0591		
		4	B3/SB-D/MP/Dpt/4	2/34x2/26x6	2	-	-	10840470,00	0,0295		
		5	B3/SB-D/MP/Dpt/5	2/34x2/26x7	2	-	-	10159460,00	0,0277		
		6	B3/SB-D/MP/Dpt/6	2/34x2/26x8	2	-	-	11227494,00	0,0306		
D.1	Sub Block Longitudinal Construction		SB-LC/	B3/SB-LC/							
	Bottom Longitudinal		B/	B3/SB-LC/B/							
	D.1.1	Centerline	CI/	B3/SB-LC/B/CI/							
			Keel Plate	Plate Bar K4	B3/SB-LC/B/CI/K4	150	15	-	885565,68	13283485,2	0,0362
		Keel Plate	Plate Bar K5	B3/SB-LC/B/CI/K5	150	15	-	446859,9367	6702899,05	0,0183	
	D.1.2	Tank Centerline Construction	Tc/	B3/SB-LC/B/CI/Tc/							
			Web Plate	WP1	B3/SB-LC/B/CI/Tc/ WP1	-	5	-	1799368,116	8996840,58	0,0245
			Stiffener	FP1	B3/SB-LC/B/CI/Tc/ FP1	80	8	3294,12	640	2108236,8	0,0057
	D.1.3	Longitudinal Bulkhead	FP2	B3/SB-LC/B/CI/Tc/ FP2	80	8	3288,821	640	2104845,44	0,0057	
			Ps/	B3/SB-LC/B/Ps/							
Bkh/			B3/SB-LC/B/Ps/Bkh/								
Web Plate			WP	B3/SB-LC/B/Ps/Bkh/ WP	-	5	-	2175068,7	10875343,5	0,0296	
D.1.3	Longitudinal Bulkhead	Stiffener	FP1	B3/SB-LC/B/Ps/Bkh/ FP1	90	8	2160,046	720	1555233,12	0,0042	
		FP2	B3/SB-LC/B/Ps/Bkh/ FP2	90	8	2160,046	720	1555233,12	0,0042		
D.1.3	Longitudinal Bulkhead	Sb/	B3/SB-LC/B/Sb/								
		Bkh/	B3/SB-LC/B/Sb/Bkh/								
D.1.3	Longitudinal Bulkhead	Web Plate	WP	B3/SB-LC/B/Sb/Bkh/ WP	-	5	-	2175068,7	10875343,5	0,0296	
		Stiffener	FP1	B3/SB-LC/B/Sb/Bkh/ FP1	90	8	2160,046	720	1555233,12	0,0042	



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)		
				Breath (mm)	Thickness (mm)						
ongitudinal Construction	Clc/	FP2	B3/SB-LC/B/Ps/Bkh/FP2	90	8	2160,046	720	1555233,12	0,0042		
		Web Plate	WP1	B3/SB-LC/B/Clc/WP1	-	5	-	2071606,48	10358032,4	0,0282	
			WP2	B3/SB-LC/B/Clc/WP2	-	5	-	969727,386	4848636,93	0,0132	
		Stiffener	FP1	B3/SB-LC/B/Clc/FP1	80	8	3283,271	640	2101293,44	0,0057	
			FP2	B3/SB-LC/B/Clc/FP2	80	8	3494,937	640	2236759,68	0,0061	
			FP3	B3/SB-LC/B/Clc/FP3	80	8	3494,937	640	2236759,68	0,0061	
			FP4	B3/SB-LC/B/Clc/FP4	80	8	2294,351	640	1468384,64	0,0040	
		FP5	B3/SB-LC/B/Clc/FP5	-	5	1293	496600,752	2483003,76	0,0068		
Sub Block Inner Bottom	SB-B/					B3/SB-B/					
E.1	Tank Top Stiffener	TT/Bp/				B3/SB-B/TT/Bp/					
		Bulb Plat	1	B3/SB-B/TT/Bp/1	85	5	2390	648,28	1549389,2	0,0042	
			2	B3/SB-B/TT/Bp/2	85	5	2390	648,28	1549389,2	0,0042	
			3	B3/SB-B/TT/Bp/3	85	5	1260	648,28	816832,8	0,0022	
			4	B3/SB-B/TT/Bp/4	85	5	2390	648,28	1549389,2	0,0042	
			5	B3/SB-B/TT/Bp/5	85	5	2390	648,28	1549389,2	0,0042	
			6	B3/SB-B/TT/Bp/6	85	5	2390	648,28	1549389,2	0,0042	
E.2	Tank Top Plate	TT/				B3/SB-B/TT/					
		Plate Bar	P1	B3/SB-B/TT/P1	-	8	-	2765991,438	22127931,5	0,0603	
			P2	B3/SB-B/TT/P2	-	8	-	932343,75	7458750	0,0203	
F.	Side Shell	SB-SS/				B3/SB-SS/					
		Bottom	B/				B3/SB-SS/B/				
			Portside	Ps/				B3/SB-SS/B/Ps/			
		F.1.1		Bottom Plate 1	Plate	1	B3/SB-SS/B/Ps/1	-	8	10947181,5	87577452
			Bottom Plate 2	Plate	2	B3/SB-SS/B/Ps/2	-	8	9331992,24	74655937,92	0,2033
		F.1.2	Starboard	Sb/				B3/SB-SS/B/Sb/			
	Bottom Plate 1			Plate	1	B3/SB-SS/B/Sb/1	-	8	10947181,5	87577452	0,2385
			Bottom Plate 2	Plate	2	B3/SB-SS/B/Sb/2	-	8	9331992,24	74655937,92	0,2033
	F.2	Side Shell	S/				B3/SB-SS/S/				
			Portside	Ps/				B3/SB-SS/S/Ps/			
		F.2.1		Side Shell Plate 1	Plate	1	B3/SB-SS/S/Ps/1	-	6	8436665,36	50619992,16
Side Shell Plate 2			Plate	2	B3/SB-SS/S/Ps/2	-	6	3139998,66	18839991,96	0,0513	
F.2.2		Starboard	Sb/				B3/SB-SS/S/Sb/				
			Side Shell Plate 1	Plate	1	B3/SB-SS/S/Sb/1	-	6	8436665,36	50619992,16	0,1378
		Side Shell Plate 2	Plate	2	B3/SB-SS/S/Sb/2	-	6	3139998,66	18839991,96	0,0513	



Head & Tank Top			Portside and Starboard							
Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)	
	Plate	Bracket/	B3/Fr24/LBkh/Bracket/1	-	5	300		65313,6499	0,0002	
	Plate	Bracket/	B3/Fr24/LBkh/Bracket/2	-	5	300		65313,6499	0,0002	
Head Tank Top			Portside and Starboard							
Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)	
	Plate	Bracket/	B3/Fr24/TT/Bracket/1	-	5	280,073		57177,8835	0,0002	
2	Bracket	Plate	Bracket/	B3/Fr24/TT/Bracket/2	-	5	280,073	57177,8835	0,0002	
3	Bracket	Plate	Bracket/	B3/Fr24/TT/Bracket/3	-	5	280,073	57177,8835	0,0002	

Frame 22 to Long Frame

Frame 22 to Long Frame			Portside and Starboard							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)
1	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/1	-	5	300		65313,6499	0,0002
2	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/2	-	5	300		65313,6499	0,0002
3	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/3	-	5	300		65313,6499	0,0002
4	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/4	-	5	300		65313,6499	0,0002
5	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/5	-	5	300		65313,6499	0,0002
6	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/6	-	5	300		65313,6499	0,0002
7	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/7	-	5	300		65313,6499	0,0002
8	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/8	-	5	300		65313,6499	0,0002
9	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/9	-	5	300		65313,6499	0,0002
10	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/10	-	5	300		65313,6499	0,0002
11	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/11	-	5	300		65313,6499	0,0002
12	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/12	-	5	300		65313,6499	0,0002
13	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/13	-	5	300		65313,6499	0,0002
14	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/14	-	5	300		65313,6499	0,0002
15	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/15	-	5	300		65313,6499	0,0002
16	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/16	-	5	300		65313,6499	0,0002
17	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/17	-	5	300		65313,6499	0,0002
18	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/18	-	5	300		65313,6499	0,0002
19	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/19	-	5	300		65313,6499	0,0002
20	Bracket	Plate	Bracket/	B3/Fr22/LF/Bracket/20	-	5	300		65313,6499	0,0002

Frame 27.5 to Long Frame

Frame 27.5 to Long Frame			Portside and Starboard							
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)
1	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/1	-	5	394,194		110119,064	0,0003
2	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/2	-	5	320,727		91453,5137	0,0002
3	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/3	-	5	332,948		95169,5289	0,0003
4	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/4	-	5	340,66		97404,8722	0,0003
5	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/5	-	5	543,054		160102,244	0,0004
6	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/6	-	5	396,634		110870,901	0,0003
7	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/7	-	5	339,106		96974,573	0,0003
8	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/8	-	5	337,689		96540,0065	0,0003
9	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/9	-	5	340,979		97484,3186	0,0003
10	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/10	-	5	339,059		96957,69	0,0003
11	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/11	-	5	300		65313,6499	0,0002
12	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/12	-	5	300		65313,6499	0,0002
13	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/13	-	5	300		65313,6499	0,0002
14	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/14	-	5	300		65313,6499	0,0002



Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)
	Plate	Bracket/	B3/Fr27.5/LF/Bracket/15	-	5	300		65313,6499	0,0002
	Plate	Bracket/	B3/Fr27.5/LF/Bracket/16	-	5	300		65313,6499	0,0002
	Plate	Bracket/	B3/Fr27.5/LF/Bracket/17	-	5	300		65313,6499	0,0002



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
		SB-F/				B4/SB-F/				
		SB-F/				B4/SB-F/				
Portside		LF/B/				B4/SB-F/LF/B/				
Bottom Portside		Ps/				B4/SB-F/LF/B/Ps/				
1										
2	LFP 2		B4/SB-F/LF/B/Ps/1	100x65	6	2997,928	954	2860023,312	0,0078	
3	LFP 3		B4/SB-F/LF/B/Ps/2	100x65	6	3007,4	954	2869059,6	0,0078	
4	LFP 4		B4/SB-F/LF/B/Ps/3	100x65	6	3012,251	954	2873687,454	0,0078	
5	LFP 5		B4/SB-F/LF/B/Ps/4	100x65	6	3017,82	954	2879000,28	0,0078	
6	LFP 6		B4/SB-F/LF/B/Ps/5	100x65	6	3023,29	954	2884218,66	0,0079	
7	LFP 7		B4/SB-F/LF/B/Ps/6	100x65	6	3029,444	954	2890089,576	0,0079	
8	LFP 8		B4/SB-F/LF/B/Ps/7	100x65	6	3035,339	954	2895713,406	0,0079	
9	LFP 9		B4/SB-F/LF/B/Ps/8	100x65	6	3040,751	954	2900876,454	0,0079	
			B4/SB-F/LF/B/Ps/9	100x65	6	3044,789	954	2904728,706	0,0079	
	Long Frame Side Shell Portside	LF/Ss1/Ps/				B4/SB-F/LF/Ss1/Ps/				
1	LF/Ps/Ss1		B4/SB-F/LF/Ss1/Ps/1	85	5	3059,856	648,28	1983643,448	0,0054	
2	LF/Ps/Ss2		B4/SB-F/LF/Ss1/Ps/2	85	5	3055,004	648,28	1980497,993	0,0054	
3	LF/Ps/Ss3		B4/SB-F/LF/Ss1/Ps/3	85	5	3050,466	648,28	1977556,098	0,0054	
4	LF/Ps/Ss4		B4/SB-F/LF/Ss1/Ps/4	85	5	3046,145	648,28	1974754,881	0,0054	
5	LF/Ps/Ss5		B4/SB-F/LF/Ss1/Ps/5	85	5	3042,104	648,28	1972135,181	0,0054	
6	LF/Ps/Ss6		B4/SB-F/LF/Ss1/Ps/6	85	5	3038,736	648,28	1969951,774	0,0054	
7	LF/Ps/Ss7		B4/SB-F/LF/Ss1/Ps/7	85	5	3036,608	648,28	1968572,234	0,0054	
8	LF/Ps/Ss8		B4/SB-F/LF/Ss1/Ps/8	85	5	2838,881	648,28	1840389,775	0,0050	
A.1.2	Long Frame Bottom Starboard	Sb/				B4/SB-F/LF/B/Sb/				
1	LFP 1		B4/SB-F/LF/B/Sb/1	100x65	6	2997,928	954	2860023,312	0,0078	
2	LFP 2		B4/SB-F/LF/B/Sb/2	100x65	6	3007,4	954	2869059,6	0,0078	
3	LFP 3		B4/SB-F/LF/B/Sb/3	100x65	6	3012,251	954	2873687,454	0,0078	
4	LFP 4		B4/SB-F/LF/B/Sb/4	100x65	6	3017,82	954	2879000,28	0,0078	
5	LFP 5		B4/SB-F/LF/B/Sb/5	100x65	6	3023,29	954	2884218,66	0,0079	
6	LFP 6		B4/SB-F/LF/B/Sb/6	100x65	6	3029,444	954	2890089,576	0,0079	
7	LFP 7		B4/SB-F/LF/B/Sb/7	100x65	6	3035,339	954	2895713,406	0,0079	
8	LFP 8		B4/SB-F/LF/B/Sb/8	100x65	6	3040,751	954	2900876,454	0,0079	
9	LFP 9		B4/SB-F/LF/B/Sb/9	100x65	6	3044,789	954	2904728,706	0,0079	
	Long Frame Side Shell Starboard	LF/Ss1/Sb/				B4/SB-F/LF/Ss1/Sb/				
1	LF/Ps/Ss1		B4/SB-F/LF/Ss1/Sb/1	85	5	3059,856	648,28	1983643,448	0,0054	
2	LF/Ps/Ss2		B4/SB-F/LF/Ss1/Sb/2	85	5	3055,004	648,28	1980497,993	0,0054	
3	LF/Ps/Ss3		B4/SB-F/LF/Ss1/Sb/3	85	5	3050,466	648,28	1977556,098	0,0054	
4	LF/Ps/Ss4		B4/SB-F/LF/Ss1/Sb/4	85	5	3046,145	648,28	1974754,881	0,0054	
5	LF/Ps/Ss5		B4/SB-F/LF/Ss1/Sb/5	85	5	3042,104	648,28	1972135,181	0,0054	
6	LF/Ps/Ss6		B4/SB-F/LF/Ss1/Sb/6	85	5	3038,736	648,28	1969951,774	0,0054	
7	LF/Ps/Ss7		B4/SB-F/LF/Ss1/Sb/7	85	5	3036,608	648,28	1968572,234	0,0054	
8	LF/Ps/Ss8		B4/SB-F/LF/Ss1/Sb/8	85	5	2838,881	648,28	1840389,775	0,0050	
	Transverse Frame	TF/				B4/SB-F/TF/				
	Transverse Frame 28	Fr28/				B4/SB-F/TF/Fr28/				
1	Portside	Ps/				B4/SB-F/TF/Fr28/Ps/				
a.	Bottom	B/				B4/SB-F/TF/Fr28/Ps/B/				
		Stiffener	FP1	B4/SB-F/TF/Fr28/Ps/B/FP1	80	8	1834,298	640	1173950,72	0,0032

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Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)	
				Breath (mm)	Thickness (mm)					
Side Shell	Stiffener	FP2	B4/SB-F/TF/Fr28/Ps/B/FP2	80	8	1631,442	640	1044122,88	0,0028	
		SS/		B4/SB-F/TF/Fr28/Ps/SS/						
	Plate Bar	WP	B4/SB-F/TF/Fr28/Ps/SS/WP	-	6	-	1319055,903	7914335,42	0,0216	
	Plate Bar	FP	B4/SB-F/TF/Fr28/Ps/SS/FP	120	12	3704,254	1440	5334125,76	0,0145	
2	Starboard	Sb/		B4/SB-F/TF/Fr28/Sb/						
b.		SS/		B4/SB-F/TF/Fr28/Sb/SS/						
	Plate Bar	WP	B4/SB-F/TF/Fr28/Sb/SS/WP	-	6	-	1319055,903	7914335,42	0,0216	
	Plate Bar	FP	B4/SB-F/TF/Fr28/Sb/SS/FP	120	12	3704,254	1440	5334125,76	0,0145	
Transverse Frame 29		Fr29/		B4/SB-F/TF/Fr29/						
1	Portside	Ps/		B4/SB-F/TF/Fr29/Ps/						
a.		B/		B4/SB-F/TF/Fr29/Ps/B/						
	Plate Bar	WP	B4/SB-F/TF/Fr29/Ps/B/WP	-	6	-	1008212,148	6049272,89	0,0165	
	Stiffener	FP1	B4/SB-F/TF/Fr29/Ps/B/FP1	100	12	2292,831	1200	2751397,2	0,0075	
	Stiffener	FP2	B4/SB-F/TF/Fr29/Ps/B/FP2	100	12	1328,388	1200	1594065,6	0,0043	
b.		SS/		B4/SB-F/TF/Fr29/Ps/SS/						
	Plate Bar	WP	B4/SB-F/TF/Fr29/Ps/SS/WP	-	6	-	1313168,62	7879011,72	0,0215	
	Plate Bar	FP	B4/SB-F/TF/Fr29/Ps/SS/FP	120	12	3564,005	1440	5132167,2	0,0140	
2	Starboard	Sb/		B4/SB-F/TF/Fr29/Sb/						
b.		SS/		B4/SB-F/TF/Fr29/Sb/SS/						
	Plate Bar	WP	B4/SB-F/TF/Fr29/Sb/SS/WP	-	6	-	1313168,62	7879011,72	0,0215	
	Plate Bar	FP	B4/SB-F/TF/Fr29/Sb/SS/FP	120	12	3564,005	1440	5132167,2	0,0140	
Sub Block Transversal Bulkhead			S-TB/		B4/S-TB/					
Bulkhead Frame 30			Fr30/		B4/S-TB/Fr30/					
B.1.1	Bracket Plate		Br/		B4/S-TB/Fr30/Br/					
		1	B4/S-TB/Fr30/Br/1	-	6	-	14520,0727	87120,4362	0,0002	
		2	B4/S-TB/Fr30/Br/2	-	6	-	14520,0727	87120,4362	0,0002	
B.1.2	Plate Bulkhead		P/		B4/S-TB/Fr30/P/					
		1	B4/S-TB/Fr30/P/1	-	6	-	2792263,383	16753580,3	0,0456	
		3	B4/S-TB/Fr30/P/3	-	20	-	567663,495	11353269,9	0,0309	
		4	B4/S-TB/Fr30/P/4	-	10	-	1317350,49	13173504,9	0,0359	
		5	B4/S-TB/Fr30/P/5	-	5	-	6569559,32	32847796,6	0,0894	
		6	B4/S-TB/Fr30/P/6	-	10	-	1317350,49	13173504,9	0,0359	
		7	B4/S-TB/Fr30/P/7	-	20	-	567663,495	11353269,9	0,0309	
		FB1	B4/S-TB/Fr30/Sf/FB1	90	8	5197,526	720	3742218,72	0,0102	
		FB2	B4/S-TB/Fr30/Sf/FB2	90	8	4569,532	720	3290063,04	0,0090	



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Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)		
				Breath (mm)	Thickness (mm)						
Plate Bar	Plate Bar	WP1	B4/S-TB/Fr30/Sf/WP1	150	5	-	1044639,658	5223198,29	0,0142		
		FP1	B4/S-TB/Fr30/Sf/FP1	60	6	2507,283	360	902621,88	0,0025		
		WP2	B4/S-TB/Fr30/Sf/WP2	150	5	-	1044639,658	5223198,29	0,0142		
		FP2	B4/S-TB/Fr30/Sf/FP2	60	6	2507,283	360	902621,88	0,0025		
		Bp1	B4/S-TB/Fr30/Sf/Bp1	85	5	965,56	648,28	625953,2368	0,0017		
		Bp2	B4/S-TB/Fr30/Sf/Bp2	85	5	1259,76	648,28	816677,2128	0,0022		
		Bp4	B4/S-TB/Fr30/Sf/Bp4	85	5	1849,92	648,28	1199266,138	0,0033		
		Bp5	B4/S-TB/Fr30/Sf/Bp5	85	5	2144,5	648,28	1390236,46	0,0038		
		Bp6	B4/S-TB/Fr30/Sf/Bp6	85	5	2438,673	648,28	1580942,932	0,0043		
		Bp7	B4/S-TB/Fr30/Sf/Bp7	85	5	2438,673	648,28	1580942,932	0,0043		
		Bp8	B4/S-TB/Fr30/Sf/Bp8	85	5	2144,5	648,28	1390236,46	0,0038		
		SF Bulb Plate	Bulb Plate	Bp9	B4/S-TB/Fr30/Sf/Bp9	85	5	1849,92	648,28	1199266,138	0,0033
Bp10	B4/S-TB/Fr30/Sf/Bp10			85	5	1555,82	648,28	1008606,99	0,0027		
Bp11	B4/S-TB/Fr30/Sf/Bp11			85	5	1259,76	648,28	816677,2128	0,0022		
Bp12	B4/S-TB/Fr30/Sf/Bp12			85	5	965,56	648,28	625953,2368	0,0017		
Tb2	B4/S-TB/Fr30/Sf/Tb2			100 x 65	6	3222,543	954	3074306,022	0,0084		
Tb3	B4/S-TB/Fr30/Sf/Tb3			100 x 65	6	2762,2	954	2635138,8	0,0072		
Tb4	B4/S-TB/Fr30/Sf/Tb4			100 x 65	6	2899,38	954	2766008,52	0,0075		
Tb5	B4/S-TB/Fr30/Sf/Tb5			100 x 65	6	2762,2	954	2635138,8	0,0072		
Tb6	B4/S-TB/Fr30/Sf/Tb6			100 x 65	6	3222,543	954	3074306,022	0,0084		
Tb7	B4/S-TB/Fr30/Sf/Tb7			100 x 65	6	2932,921	954	2798006,634	0,0076		
Sub Blok Deck	SB-D/			B4/SB-D/							
	TDB/			B4/SB-D/TDB/							
Transverse Deck Beam		Fr28/		B4/SB-D/TDB/Fr28/							
Transverse Deck Beam Frame 28		CI/		B4/SB-D/TDB/Fr28/CI/							
a.	Centerline	Plate	WP	B4/SB-D/TDB/Fr28/CI/WP	150	5	-	323987,874	1619939,37	0,0044	
			FP1	B4/SB-D/TDB/Fr28/CI/FP1	60	6	1850	360	666000	0,0018	
			FP2	B4/SB-D/TDB/Fr28/CI/FP2	60	6	2072	360	745920	0,0020	
b.	Portside	Plate	Ps/								
			B4/SB-D/TDB/Fr28/Ps/								
			WP	B4/SB-D/TDB/Fr28/Ps/WP	187	5	-	245890,074	1229450,37	0,0033	
FP1	B4/SB-D/TDB/Fr28/Ps/FP1	60	6	2329	360	838440	0,0023				
FP2	B4/SB-D/TDB/Fr28/Ps/FP2	60	6	1429,79	360	514724,4	0,0014				
c.	Starboard	Plate	Sb/								
			B4/SB-D/TDB/Fr28/Sb/								
			WP	B4/SB-D/TDB/Fr28/Sb/WP	187	5	-	245890,074	1229450,37	0,0033	
FP1	B4/SB-D/TDB/Fr28/Sb/FP1	60	6	2329	360	838440	0,0023				
FP2	B4/SB-D/TDB/Fr28/Sb/FP2	60	6	1429,79	360	514724,4	0,0014				
C.1	Transverse Deck Beam Frame 29		Fr29/		B4/SB-D/TDB/Fr29/						
			CI/		B4/SB-D/TDB/Fr29/CI/						
a.	Centerline	Plate	WP	B4/SB-D/TDB/Fr29/CI/WP	150	5	-	361530,476	1807652,38	0,0049	
			FP1	B4/SB-D/TDB/Fr29/CI/FP1	60	6	1850	360	666000	0,0018	
			FP2	B4/SB-D/TDB/Fr29/CI/FP2	60	6	546,54	360	196754,4	0,0005	
			FP3	B4/SB-D/TDB/Fr29/CI/FP3	60	6	546,54	360	196754,4	0,0005	
C.2.2		Ps/		B4/SB-D/TDB/Fr29/Ps/							



Nama	Material	Sub Code	Kode	Penampang Profil (mm)		Panjang (mm)	Luas Penampang Profil(mm ²)	Volume Profil (mm ³)	Berat (Ton)				
				Breath (mm)	Thickness (mm)								
Portside	Plate	WP	B4/SB-D/TDB/Fr29/Ps/WP	187	5	-	206831,41	1034157,05	0,0028				
		FP1	B4/SB-D/TDB/Fr29/Ps/FP1	60	6	1165,88	360	419716,8	0,0011				
		FP2	B4/SB-D/TDB/Fr29/Ps/FP2	60	6	2191,73	360	789022,8	0,0021				
Starboard	Plate	WP	B4/SB-D/TDB/Fr29/Sb/WP	187	5	-	206831,41	1034157,05	0,0028				
		FP1	B4/SB-D/TDB/Fr29/Sb/FP1	60	6	1165,88	360	419716,8	0,0011				
		FP2	B4/SB-D/TDB/Fr29/Sb/FP2	60	6	2191,73	360	789022,8	0,0021				
C.2	Long Deck Beam Center	LDB/		B4/SB-D/LDB/									
		Web Plate	WP1	B4/SB-D/LDB/WP1	187	5	-	223465	1117325	0,0030			
			WP2	B4/SB-D/LDB/WP2	187	5	-	223465	1117325	0,0030			
		Face Plate	FB1	B4/SB-D/LDB/FB1	60	6	1195	360	430200	0,0012			
			FB2	B4/SB-D/LDB/FB2	60	6	1195	360	430200	0,0012			
		Bulb Plate	Bp1	B4/SB-D/LDB/Bp1	85	5	1045	648,28	677452,6	0,0018			
			Bp2	B4/SB-D/LDB/Bp2	85	5	1045	648,28	677452,6	0,0018			
			Bp3	B4/SB-D/LDB/Bp3	85	5	1045	648,28	677452,6	0,0018			
			Bp4	B4/SB-D/LDB/Bp4	85	5	895,772	648,28	580711,0722	0,0016			
		Deck Plate	MDP	B4/SB-D/LDB/MDP	-	5	-	-	5355875,9	0,0146			
D.	Sub Block Longitudinal Construction		SB-LC/	B4/SB-LC/									
	D.1	Bottom Longitudinal		B/	B4/SB-LC/B/								
		Centerline	Keel Plate		C/	B4/SB-LC/B/C/							
		Plate Bar	K6	B4/SB-LC/B/C/K6	150	15	-	498503,2107	7477548,16	0,0204			
E	Side Shell		SB-SS/	B4/SB-SS/									
	Bottom		B/	B4/SB-SS/B/									
	EF.1	Portside	Ps/		B4/SB-SS/B/Ps/								
			Bottom Plate 1	Plate	1	B4/SB-SS/B/Ps/1	-	8	-	4663741,77	37309934,16	0,1016	
			Bottom Plate 2	Plate	2	B4/SB-SS/B/Ps/2	-	8	-	1891825,81	15134606,48	0,0412	
			Bottom Plate 3	Plate	3	B4/SB-SS/B/Ps/3	-	8	-	3002250,01	24018000,08	0,0654	
	Bottom Plate 4	Plate	4	B4/SB-SS/B/Ps/4	-	8	-	2049726,58	16397812,64	0,0447			
	E.1.2	Starboard	Sb/		B4/SB-SS/B/Sb/								
			Bottom Plate 1	Plate	1	B4/SB-SS/B/Sb/1	-	8	-	4663741,77	37309934,16	0,1016	
			Bottom Plate 2	Plate	2	B4/SB-SS/B/Sb/2	-	8	-	1891825,81	15134606,48	0,0412	
			Bottom Plate 3	Plate	3	B4/SB-SS/B/Sb/3	-	8	-	3002250,01	24018000,08	0,0654	
	Bottom Plate 4	Plate	4	B4/SB-SS/B/Sb/4	-	8	-	2049726,58	16397812,64	0,0447			
	Side Shell		S/	B4/SB-SS/S/									
	F.2	E.2.1	Portside	Ps/		B4/SB-SS/S/Ps/							
				Side Shell Plate 1	Plate	1	B4/SB-SS/S/Ps/1	-	6	-	2587325,66	15523953,96	0,0423
				Side Shell Plate 2	Plate	2	B4/SB-SS/S/Ps/2	-	6	-	7410775,51	44464653,06	0,1211
Side Shell Plate 3				Plate	3	B4/SB-SS/S/Ps/3	-	6	-	1308496,28	7850977,68	0,0214	
Side Shell Plate 4		Plate	4	B4/SB-SS/S/Ps/4	-	6	-	358997,298	2153983,788	0,0059			
E.2.2		Starboard	Sb/		B4/SB-SS/S/Sb/								
			Side Shell Plate 1	Plate	1	B4/SB-SS/S/Sb/1	-	6	-	2587325,66	15523953,96	0,0423	
			Side Shell Plate 2	Plate	2	B4/SB-SS/S/Sb/2	-	6	-	7410775,51	44464653,06	0,1211	
	Side Shell Plate 3		Plate	3	B4/SB-SS/S/Sb/3	-	6	-	1308496,28	7850977,68	0,0214		
Side Shell Plate 4	Plate	4	B4/SB-SS/S/Sb/4	-	6	-	358997,298	2153983,788	0,0059				



B3/Fr/B/K/			Portside and Starboard						
Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)
	Plate	Bracket/	B3/Fr/B/K/Bracket/1	-	5	762,435		339231,939	0,0009
	Plate	Bracket/	B3/Fr/B/K/Bracket/2	-	5	762,435		339231,939	0,0009

B3/Fr27.5/LF/									
Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)
	Plate	Bracket/	B3/Fr27.5/LF/Bracket/1	-	5	300		65313,6499	0,0002
	Plate	Bracket/	B3/Fr27.5/LF/Bracket/2	-	5	300		65313,6499	0,0002
3	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/3	-	5	300	65313,6499	0,0002
4	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/4	-	5	300	65313,6499	0,0002
5	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/5	-	5	300	65313,6499	0,0002
6	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/6	-	5	300	65313,6499	0,0002
7	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/7	-	5	300	65313,6499	0,0002
8	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/8	-	5	300	65313,6499	0,0002
9	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/9	-	5	300	65313,6499	0,0002
10	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/10	-	5	300	65313,6499	0,0002
11	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/11	-	5	300	65313,6499	0,0002
12	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/12	-	5	300	65313,6499	0,0002
13	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/13	-	5	300	65313,6499	0,0002
14	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/14	-	5	300	65313,6499	0,0002
15	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/15	-	5	300	65313,6499	0,0002
16	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/16	-	5	300	65313,6499	0,0002
17	Bracket	Plate	Bracket/	B3/Fr27.5/LF/Bracket/17	-	5	300	65313,6499	0,0002

Frame 30 to Long Frame

B3/Fr30/LF/										
No.	Nama	Material	Sub Code	Kode	Sub Code	Thickness	Panjang (mm)	Penampang Profil	Volume Profil (mm ³)	Berat (Ton)
1	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/1	-	5	300		65313,6499	0,0002
2	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/2	-	5	300		65313,6499	0,0002
3	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/3	-	5	300		65313,6499	0,0002
4	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/4	-	5	300		65313,6499	0,0002
5	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/5	-	5	300		65313,6499	0,0002
6	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/6	-	5	300		65313,6499	0,0002
7	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/7	-	5	300		65313,6499	0,0002
8	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/8	-	5	300		65313,6499	0,0002
9	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/9	-	5	300		65313,6499	0,0002
10	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/10	-	5	300		65313,6499	0,0002
11	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/11	-	5	300		65313,6499	0,0002
12	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/12	-	5	300		65313,6499	0,0002
13	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/13	-	5	300		65313,6499	0,0002
14	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/14	-	5	300		65313,6499	0,0002
15	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/15	-	5	300		65313,6499	0,0002
16	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/16	-	5	300		65313,6499	0,0002
17	Bracket	Plate	Bracket/	B3/Fr30/LF/Bracket/17	-	5	300		65313,6499	0,0002

LAMPIRAN V PERHITUNGAN BERAT KONSTRUKSI dan PENGELASAN



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No.	Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
					Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
												B1/S-TB/	
2	B1/S-TB/Fr13/P/	B1/S-TB/Fr13/P/	Butt Joint	2053,24	35,316	10,8	36256,11192	11087,496	0,000129	0,403763	Downhand		
				3896,166	28,668	7,2	55847,64344	14026,1976	0,0002		Downhand		
				7646,354	28,668	7,2	109602,8382	27526,8744	0,0004		Downhand		
				3849,808	17,04	7,2	32800,36416	13859,3088	0,0001		Downhand		
				10191,198	17,04	7,2	86829,00696	36688,3128	0,0003		Downhand		
				B1/S-TB/Fr13/S/	Fillet Join	3402,129091	10,8	36742,99418	0		0,0001	0,006690	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1366,344545	10,8	14756,52109	0		0,0000	0,002811	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	3402,129091	10,8	36742,99418	0		0,0001	0,006690	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1380,909091	10,8	14913,81818	0		0,0000	0,002072	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1380,909091	10,8	14913,81818	0		0,0000	0,002072	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	572,7272727	10,8	6185,454545	0		0,000017	0,000327	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	572,7272727	10,8	6185,454545	0		0,000017	0,000327	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	572,7272727	10,8	6185,454545	0		0,000017	0,000327	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	572,7272727	10,8	6185,454545	0		0,000017	0,000327	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	845,4545455	10,8	9130,909091	0		0,000025	0,000654	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1118,181818	10,8	12076,36364	0		0,0000	0,000980	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1410,384545	10,8	15232,15309	0		0,0000	0,002156	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1485,49	10,8	16043,292	0		0,0000	0,002302	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	644,3209091	10,8	6958,665818	0		0,0000	0,000669	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	718,0554545	10,8	7754,998909	0		0,0000	0,000812	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	786,4136364	10,8	8493,267273	0		0,0000	0,000945	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	874,5454545	10,8	9445,090909	0		0,0000	0,001116	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	951,8181818	10,8	10279,63636	0		0,0000	0,001266	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	951,8181818	10,8	10279,63636	0		0,0000	0,001266	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	951,8181818	10,8	10279,63636	0		0,0000	0,001266	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	951,8181818	10,8	10279,63636	0		0,0000	0,001266	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	874,5454545	10,8	9445,090909	0		0,0000	0,001116	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	846,7345455	10,8	9144,733091	0		0,0000	0,001062	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	786,4136364	10,8	8493,267273	0		0,0000	0,000945	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	718,0554545	10,8	7754,998909	0		0,0000	0,000812	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1485,49	10,8	16043,292	0		0,0000	0,002302	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1410,384545	10,8	15232,15309	0		0,0000	0,002099	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1380,966364	10,8	14914,43673	0		0,0000	0,002156	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1384,554545	10,8	14953,18909	0		0,0000	0,002106	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1389,568182	10,8	15007,33636	0		0,0000	0,002116	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1394,581818	10,8	15061,48364	0		0,0000	0,002125	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2383,636364	10,8	25743,27273	0		0,0001	0,004046	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2383,636364	10,8	25743,27273	0		0,0001	0,004046	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2389,090909	10,8	25802,18182	0		0,0001	0,004057	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2394,193636	10,8	25857,29127	0		0,0001	0,004066	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2111,363636	10,8	22802,72727	0		0,0001	0,003517	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2407,044545	10,8	25996,08109	0		0,0001	0,004091	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2310	10,8	24948	0		0,0001	0,003903	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	1924,545455	10,8	20785,09091	0		0,0001	0,003155	Downhand
				B1/S-TB/Fr13/S/	Fillet Join	2422,672727	10,8	26164,86545	0		0,0001	0,004122	Downhand
B1/S-TB/Fr13/S/	Fillet Join	2111,363636	10,8	22802,72727	0	0,0001	0,003517	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	2394,193636	10,8	25857,29127	0	0,0001	0,004066	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	2389,090909	10,8	25802,18182	0	0,0001	0,004057	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	2379,090909	10,8	25694,18182	0	0,0001	0,004037	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	2383,636364	10,8	25743,27273	0	0,0001	0,004046	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	1394,581818	10,8	15061,48364	0	0,0000	0,002125	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	1389,568182	10,8	15007,33636	0	0,0000	0,002116	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	1384,554545	10,8	14953,18909	0	0,0000	0,002106	Downhand					
B1/S-TB/Fr13/S/	Fillet Join	1380,966364	10,8	14914,43673	0	0,0000	0,002099	Downhand					
B1/SB-LC/TT/Ps/SA-1/FP1	B1/SB-LC/TT/Ps/SA-1/FP1	Fillet Join	2228,158182	10,8	24064,10836	0	0,0001	0,005775412	Downhand				
B1/SB-LC/TT/Ps/SA-2/FP1	B1/SB-LC/TT/Ps/SA-2/FP1	Fillet Join	2228,158182	10,8	24064,10836	0	0,0001	0,005775412	Downhand				
B1/SB-LC/TT/Sb/SA-1/FP1	B1/SB-LC/TT/Sb/SA-1/FP1	Fillet Join	2228,158182	10,8	24064,10836	0	0,0001	0,005775412	Downhand				
B1/SB-LC/TT/Sb/SA-2/FP1	B1/SB-LC/TT/Sb/SA-2/FP1	Fillet Join	2228,158182	10,8	24064,10836	0	0,0001	0,005775412	Downhand				
B1/S-TB/Fr13/P/	B1/SB-LC/TT/Ps/SA-1/WP1B1/SB-LC/TT/Ps/SA-1/FP	Fillet Join	1930,499	10,8	20849,3892	20849,3892	0,0001	0,0001	Downhand				
B1/S-TB/Fr13/P/	B1/SB-LC/TT/Ps/SA-2/WP1B1/SB-LC/TT/Ps/SA-2/FP	Fillet Join	1930,499	10,8	20849,3892	20849,3892	0,0001	0,0001	Downhand				
Total 1				114928,3704					0,0038	0,5432	543,2124465		
Sub Blok Transverse Bulkhead Fr													
B1/S-TB/Fr17/P/													
Luas Penampang Kampuh Las													
Volume Pengelasan													
No.	Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)	Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi			
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)						
B1/S-TB/Fr17/P/2	B1/S-TB/Fr17/P/	Butt Joint	7073,728	17,04	7,2	60268,16256	25465,4208	0,000233	0,327496	Downhand			
B1/S-TB/Fr17/P/3			3141,726	17,04	7,2	26767,50552	11310,2136	0,000104		Downhand			
B1/S-TB/Fr17/P/4			9579,978	17,04	7,2	81621,41256	34487,9208	0,000316		Downhand			
B1/S-TB/Fr17/P/5			3939,976	17,04	7,2	33568,59552	14183,9136	0,000130		Downhand			
B1/S-TB/Fr17/P/5			3418,712	17,04	7,2	29127,42624	12307,3632	0,000113		Downhand			
B1/S-TB/Fr17/Sf/FB1	B1/S-TB/Fr17/Sf/FB2	Fillet Join	10996,44818	30		329893,4455	0	0,000898	0,028194383	Downhand			
B1/S-TB/Fr17/Sf/FB2			572,7272727	10,8		6185,454545	0	0,000017	0,000383943	Downhand			
B1/S-TB/Fr17/Sf/FB3			572,7272727	10,8		6185,454545	0	0,000017	0,000383943	Downhand			
B1/S-TB/Fr17/Sf/FB4			1390,909091	30		41727,27273	0	0,000114	0,002483376	Downhand			
B1/S-TB/Fr17/Sf/Tb1			2452,387273	30		73571,61818	0	0,000200	0,006150482	Downhand			
B1/S-TB/Fr17/Sf/Tb2			2555,091818	30		76652,75455	0	0,000209	0,006443961	Downhand			
B1/S-TB/Fr17/Sf/Tb3			2653,674545	30		79610,23636	0	0,000217	0,006725663	Downhand			
B1/S-TB/Fr17/Sf/Tb4			2755,03	30		82650,9	0	0,000225	0,007015288	Downhand			
B1/S-TB/Fr17/Sf/Tb5			2854,435455	30		85633,06364	0	0,000233	0,007299341	Downhand			
B1/S-TB/Fr17/Sf/Tb6			2971,878182	30		89156,34545	0	0,000243	0,007634935	Downhand			
B1/S-TB/Fr17/Sf/Tb7			3071,515455	30		92145,46364	0	0,000251	0,00791965	Downhand			
B1/S-TB/Fr17/Sf/Tb8			3108,84	30		93265,2	0	0,000254	0,008026306	Downhand			
B1/S-TB/Fr17/Sf/Tb9			2349,274545	30		70478,23636	0	0,000192	0,00585835	Downhand			
B1/S-TB/Fr17/Sf/Tb10			3108,84	30		93265,2	0	0,000254	0,008026306	Downhand			
B1/S-TB/Fr17/Sf/Tb11			2349,274545	30		70478,23636	0	0,000192	0,00585835	Downhand			
B1/S-TB/Fr17/Sf/Tb12			2452,387273	30		73571,61818	0	0,000200	0,006150482	Downhand			
B1/S-TB/Fr17/Sf/Tb13			2555,091818	30		76652,75455	0	0,000209	0,006443961	Downhand			
B1/S-TB/Fr17/Sf/Tb14			2653,674545	30		79610,23636	0	0,000217	0,006725663	Downhand			
B1/S-TB/Fr17/Sf/Tb15			2755,03	30		82650,9	0	0,000225	0,007015288	Downhand			
B1/S-TB/Fr17/Sf/Tb16			2854,435455	30		85633,06364	0	0,000233	0,007299341	Downhand			
B1/S-TB/Fr17/Sf/Tb17			2971,878182	30		89156,34545	0	0,000243	0,007634935	Downhand			
B1/S-TB/Fr17/Sf/Tb18			3071,515455	30		92145,46364	0	0,000251	0,00791965	Downhand			
B1/S-TB/Fr17/Sf/Bp1			1380,966364	10,8		14914,43673	0	0,000041	0,002099013	Downhand			
B1/S-TB/Fr17/Sf/Bp2			951,1409091	10,8		10272,32182	0	0,000028	0,001264381	Downhand			
B1/S-TB/Fr17/Sf/Bp3			951,1409091	10,8		10272,32182	0	0,000028	0,001264381	Downhand			
B1/S-TB/Fr17/Sf/Bp4			951,1409091	10,8		10272,32182	0	0,000028	0,001264381	Downhand			
B1/S-TB/Fr17/Sf/Bp5			1380,966364	10,8		14914,43673	0	0,000041	0,002099013	Downhand			
B1/SB-LC/TT/Ps/SA-1/WP1			B1/SB-LC/TT/Ps/SA-1/FP1	Fillet Join	4241,948	10,8	0	45813,0384	0	6,55266E-05	0,00577541	Downhand	
B1/SB-LC/TT/Ps/SA-2/WP1	B1/SB-LC/TT/Ps/SA-2/FP1	Fillet Join	2120,974	10,8	0	22906,5192	0	6,55266E-05	0,00577541	Downhand			
B1/SB-LC/TT/Sb/SA-1/WP1	B1/SB-LC/TT/Sb/SA-1/FP1	Fillet Join	2120,974	10,8	0	22906,5192	0	6,55266E-05	0,00577541	Downhand			
B1/SB-LC/TT/Sb/SA-2/WP1	B1/SB-LC/TT/Sb/SA-2/FP1	Fillet Join	2120,974	10,8	0	22906,5192	0	6,55266E-05	0,00577541	Downhand			
B1/S-TB/Fr17/P/	B1/SB-LC/TT/Ps/SA-1/WP1B1/SB-LC/TT/Ps/SA-1/FP	Fillet Join	3860,998	10,8	10,8	20849,3892	20849,3892	0,0001		Downhand			
B1/S-TB/Fr17/P/	B1/SB-LC/TT/Ps/SA-2/WP1B1/SB-LC/TT/Ps/SA-2/FP	Fillet Join	3860,998	10,8	10,8	20849,3892	20849,3892	0,0001		Downhand			
Total 2			114173,4078					0,0066	0,5162	516,1776624			
Sub Blok Bottom													
Panel Centerline-A1 B1													
Join Sub Panel													
No.	Weld Item		Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi	
	Komponen	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)				
1	B1/SB-LC/B/Ps/SA1/FB1/SB-LC/B/Ps/SA1/FB1B1/SB-LC/B/Ps/SA1/FB2	B1/SB-LC/B/Ps/SA1/FB2	B1/SB-LC/B/Ps/SA1/	Butt Joint	2548,086	35,32056	10,8	44999,91222	13759,6644	0,000160	0,244866	Downhand	
					2119,574	30		31793,61	31793,61	0,0002		Downhand	
					8944,902	30		134773,53	134773,53	0,0007		Downhand	
					7182,434	30		107736,51	107736,51	0,0006		Downhand	
					8938,828	30		134082,42	134082,42	0,0007		Downhand	
2	B1/SB-LC/B/Sb/SB1/FB1/SB-LC/B/Sb/SB1/FB2	B1/SB-LC/B/Sb/SB1/FB2	B1/SB-LC/B/Sb/SB1/	Butt Joint	2548,086	35,32056	10,8	44999,91222	13759,6644	0,0002	0,246002472	Downhand	
					2390,022	30		35850,33	35850,33	0,0002		Downhand	
					2390,022	30		35850,33	35850,33	0,0002		Downhand	
					2390,022	30		35850,33	35850,33	0,0002		Downhand	
					7140,474	30		107107,11	107107,11	0,0006		Downhand	
3	B1/SB-F/TF/Fr14/CiB/WP	B1/SB-F/TF/Fr14/CiB/	B1/SB-F/TF/Fr14/CiB/	Fillet Join	2814,34	30	30	42215,1	42215,1	0,0002	0,008373262	Downhand	
					2620,6402	30	30	39309,603	39309,603	0,0002		Downhand	
					2340	30	30,228	89813,88	35366,76	0,0003		0,095044945	Downhand
					2814,349	28,668	7,2	40340,87857	10131,6564	0,0001		0,008767601	Downhand
					2558,05	35,316	10,8	45170,0469	13813,47	0,0002		0,005165823	Downhand
4	B1/SB-F/TF/Fr15/CiB/WP	B1/SB-F/TF/Fr15/CiB/FP	B1/SB-F/TF/Fr15/CiB/	Butt Joint	2340	76,764	30,228	89813,88	35366,76	0,0003	0,098905976	Downhand	
					2340	76,764	30,228	89813,88	35366,76	0,0003		Downhand	
					2340	76,764	30,228	89813,88	35366,76	0,0003		Downhand	
					2340	76,764	30,228	89813,88	35366,76	0,0003		Downhand	
					2340	76,764	30,228	89813,88	35366,76	0,0003		Downhand	
Join Panel	B1/SB-F/TF/Fr14/CiB/			Fillet Join	1529,558	30		22943,37	22943,37	0,000125		Downhand	
	B1/SB-F/TF/Fr14/CiB/			Fillet Join	2385,602	30		35784,03	35784,03	0,000195		Downhand	



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi	
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)				
B1/SB-F/TF/Fr14.6/C/B/	Panel Centerline-A1 B1	Fillet Join	1551,874	76,8	76,8	59591,9616	59591,9616	0,000325		Downhand	
B1/SB-F/TF/Fr15/C/B/		Fillet Join	1551,874	30	30	23278,11	23278,11	0,000127		Downhand	
B1/SB-F/TF/Fr16/C/B/		Fillet Join	2592,304	76,8	76,8	99544,4736	99544,4736	0,000542		Downhand	
B1/SB-F/TF/Fr14/C/B/		Fillet Join	1529,558	30	30	22943,37	22943,37	0,000125		Downhand	
B1/SB-F/TF/Fr14/C/TT/		Fillet Join	2385,602	30	30	35784,03	35784,03	0,000195		Downhand	
B1/SB-F/TF/Fr14.6/C/B/		Fillet Join	1551,874	76,8	76,8	59591,9616	59591,9616	0,000325		Downhand	
B1/SB-F/TF/Fr15/C/B/		Fillet Join	1551,874	30	30	23278,11	23278,11	0,000127		Downhand	
B1/SB-F/TF/Fr16/C/B/		Fillet Join	2592,304	76,8	76,8	99544,4736	99544,4736	0,000542		Downhand	
Total 3				95482,2532					0,0089	0,711772	711,7224157

Portside Panel SA

Join Sub Panel

No.	Weid Item		Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Komponen	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B1/SB-LC/B/Ps/SA2/FB1 B1/SB-LC/B/Ps/SA2/FB2	B1/SB-LC/B/Ps/SA2/FB2	B1/SB-LC/B/Ps/SA2/	Butt Join	2206,492	35,32056	10,8	38967,26654	11915,0568	0,000139	0,195869932	Downhand
		B1/SB-LC/B/Ps/SA2/S1			7140	30	30	107100	107100	0,0006		Downhand
		B1/SB-LC/B/Ps/SA2/S2			7140	30	30	107100	107100	0,0006		Downhand
		B1/SB-LC/B/Ps/SA2/S3			7140	30	30	107100	107100	0,0006		Downhand
		B1/SB-LC/B/Ps/SA2/S4			2340	30	30	35100	35100	0,0002		Downhand
		B1/SB-LC/B/Ps/SA2/S5			2340	30	30	35100	35100	0,0002		Downhand
2	B1/SB-F/TF/Fr14/Ps/SAWP1 B1/SB-F/TF/Fr14/Ps/SAWP2	B1/SB-F/TF/Fr14/Ps/SAWP2	B1/SB-F/TF/Fr14/Ps/SA	Butt Join	400	28,668	7,2	5733,6	1440	0,0000	0,007655993	Downhand
		B1/SB-F/TF/Fr14/Ps/SAWP1			2598,576	30	30	38978,64	38978,64	0,0002	0,002264295	Downhand
3	B1/SB-F/TF/Fr14.6/Ps/SAWP1 B1/SB-F/TF/Fr14.6/Ps/SAWP2	B1/SB-F/TF/Fr14.6/Ps/SAWP2	1/SB-F/TF/Fr14.6/Ps/SA	Butt Join	1179,79	76,764	30,228	45282,89978	17831,34606	0,0002	0,026122206	Downhand
		B1/SB-F/TF/Fr14.6/Ps/SAWP1			1170	185,66652	174,86652	108614,9142	102296,9142	0,0006	0,027237978	Downhand
4	B1/SB-F/TF/Fr15/Ps/SAWP1 B1/SB-F/TF/Fr15/Ps/SAWP2	B1/SB-F/TF/Fr15/Ps/SAWP2	B1/SB-F/TF/Fr15/Ps/SA	Butt Join	400	28,668	7,2	5733,6	1440	0,0000	0,007742968	Downhand
		B1/SB-F/TF/Fr15/Ps/SAWP1			2581,6352	30	30	38724,528	38724,528	0,0002	0,002249534	Downhand
5	B1/SB-F/TF/Fr16/Ps/SAWP1 B1/SB-F/TF/Fr16/Ps/SAWP2	B1/SB-F/TF/Fr16/Ps/SAWP2	B1/SB-F/TF/Fr16/Ps/SA	Butt Join	1179,79	76,764	30,228	45282,89978	17831,34606	0,0002	0,026326903	Downhand
		B1/SB-F/TF/Fr16/Ps/SAWP1			1170	185,66652	174,86652	108614,9142	102296,9142	0,0006	0,027766012	Downhand
Join Panel												
1	B1/SB-LC/B/Ps/SA2/	B1/SB-F/TF/Fr14/Ps/SA/	Portside Panel SA	Fillet Join	1303,71	30	30	19555,65	19555,65	0,000107		Downhand
		B1/SB-F/TF/Fr14.6/Ps/SA/			2052,22	76,8	76,8	78805,248	78805,248	0,000429		Downhand
		B1/SB-F/TF/Fr15/Ps/SA/			1301,734	76,8	76,8	49986,5856	49986,5856	0,000272		Downhand
		B1/SB-F/TF/Fr16/Ps/SA/			2136,908	76,8	76,8	82057,2672	82057,2672	0,000447		Downhand
Total 4				48120,8552					0,0057	0,3232	323,2358201	

Starboard Panel SA

Join Sub Panel

No.	Weid Item		Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Komponen	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B1/SB-LC/B/Sb/SA2/FB1 B1/SB-LC/B/Sb/SA2/FB2	B1/SB-LC/B/Sb/SA2/FB2	B1/SB-LC/B/Sb/SA2/	Butt Join	2206,492	35,32056	10,8	38967,26654	11915,0568	0,000139	0,195869932	Downhand
		B1/SB-LC/B/Sb/SA2/S1			7140	30	30	107100	107100	0,0006		Downhand
		B1/SB-LC/B/Sb/SA2/S2			7140	30	30	107100	107100	0,0006		Downhand
		B1/SB-LC/B/Sb/SA2/S3			7140	30	30	107100	107100	0,0006		Downhand
		B1/SB-LC/B/Sb/SA2/S4			2340	30	30	35100	35100	0,0002		Downhand
		B1/SB-LC/B/Sb/SA2/S5			2340	30	30	35100	35100	0,0002		Downhand
2	B1/SB-F/TF/Fr14/Sb/SAWP1 B1/SB-F/TF/Fr14.6/Sb/SAWP2	B1/SB-F/TF/Fr14.6/Sb/SAWP2	B1/SB-F/TF/Fr14/Sb/SAWP	Butt Join	1179,79	76,764	30,228	45282,89978	17831,34606	0,0002	0,015228396	Downhand
		B1/SB-F/TF/Fr14.6/Sb/SAWP1			1170	185,66652	174,86652	108614,9142	102296,9142	0,0006	0,027237978	Downhand
3	B1/SB-F/TF/Fr15/Sb/SAWP1 B1/SB-F/TF/Fr15/Sb/SAWP2	B1/SB-F/TF/Fr15/Sb/SAWP2	B1/SB-F/TF/Fr15/Sb/SA	Butt Join	400	28,668	7,2	5733,6	1440	0,0000	0,007742968	Downhand
		B1/SB-F/TF/Fr15/Sb/SAWP1			2581,6352	30	30	38724,528	38724,528	0,0002	0,002249534	Downhand
4	B1/SB-F/TF/Fr16/Sb/SAWP1 B1/SB-F/TF/Fr16/Sb/SAWP2	B1/SB-F/TF/Fr16/Sb/SAWP2	B1/SB-F/TF/Fr16/Sb/SA	Butt Join	1179,79	76,764	30,228	45282,89978	17831,34606	0,0002	0,026326903	Downhand
		B1/SB-F/TF/Fr16/Sb/SAWP1			1170	185,66652	174,86652	108614,9142	102296,9142	0,0006	0,027766012	Downhand
Join Panel												
1	B1/SB-LC/B/Sb/SA2/	B1/SB-F/TF/Fr14/Sb/SAWP	Starboard Panel SA	Fillet Join	2129,56	30	30	31943,4	31943,4	0,000174		Downhand
		B1/SB-F/TF/Fr14.6/Sb/SA/			2052,22	76,8	76,8	78805,248	78805,248	0,000429		Downhand
		B1/SB-F/TF/Fr15/Sb/SA/			1301,734	76,8	76,8	49986,5856	49986,5856	0,000272		Downhand
		B1/SB-F/TF/Fr16/Sb/SA/			2136,908	76,8	76,8	82057,2672	82057,2672	0,000447		Downhand
Total 5				45948,1292					0,0055	0,32854	328,5439285	

Panel Tank Top

Join Sub Panel



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
Weld Item	Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Kampuh I (mm²)	Kampuh II (Back Gouging/Double Continuous) (mm²)	Volume I (mm³)	Volume II (mm³)	Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi	
P1	B1/SB-F/TF/Fr14/Sb/SB/WP2	B1/SB-F/TF/Fr14/Sb/SB	Butt Joint	800	28.668	7.2	11467.2	2880	0.0000	0.014816598	Downhand	
P2	B1/SB-F/TF/Fr14/Sb/SB/FP	B1/SB-F/TF/Fr14/Sb/SB/FP	Fillet Joint	2598,6754	30	30	38978,631	38978,631	0.0002	0.001698221	Downhand	
WF	B1/SB-F/TF/Fr14.6/Sb/SB/W	B1/SB-F/TF/Fr14.6/Sb/SB	Butt Joint	3008,966	76,764	30,228	115490,133	45477,51212	0.0004	0.073525268	Downhand	
3	B1/SB-F/TF/Fr15/Sb/SB/WP2	B1/SB-F/TF/Fr15/Sb/SB	Butt Joint	1314,196	76,8	30	50465,1264	19712,94	0.0002	0.015859686	Downhand	
4	B1/SB-F/TF/Fr16/Sb/SB/WP2	B1/SB-F/TF/Fr16/Sb/SB	Butt Joint	800	28.668	7.2	11467.2	2880	0.0000	0.014079776	Downhand	
	B1/SB-F/TF/Fr15/Sb/SB/WP2	B1/SB-F/TF/Fr15/Sb/SB	Fillet Joint	4420,52	30	30	66307,8	66307,8	0.0004	0.003851864	Downhand	
	B1/SB-F/TF/Fr16/Sb/SB/WP2	B1/SB-F/TF/Fr16/Sb/SB	Butt Joint	3008,966	76,764	30,228	115490,133	45477,51212	0.0004	0.074438216	Downhand	
	B1/SB-F/TF/Fr16/Sb/SB/WP2	B1/SB-F/TF/Fr16/Sb/SB	Butt Joint	1314,196	76,8	30	50465,1264	19712,94	0.0002	0.016382816	Downhand	
Total 8				17265,4194					0,0019	0,2147		
Assembly Sub Block Bottom												
No.	Weld Item		Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Penambahan Berat Bracket (Ton)	Posisi
	Panel Tank Top	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	Panel Tank Top	B1/SB-LC/B/PS/SA1/	Panel Centerline-A1 B1	Fillet Joint	9470	76.8	76.8	363648	363648	0.0020		Downhand
		B1/SB-LC/B/Sb/SB1/		Fillet Joint	9466	76.8	76.8	363494.4	363494.4	0.0020		Downhand
		B1/SB-F/TF/Fr14/C/TT/WP		Fillet Joint	2140	10.8	10.8	11556	11556	0.0001		Downhand
		B1/SB-F/TF/Fr14.6/CB/WP2		Fillet Joint	2140	76.8	76.8	82176	82176	0.0004		Downhand
		B1/SB-F/TF/Fr16/C/WP2		Fillet Joint	2312	76.8	76.8	88780.8	88780.8	0.0005		Downhand
2	Panel Tank Top	B1/SB-LC/B/PS/SA2/	Portside Panel SA	Fillet Joint	9496,564	76.8	76.8	364668,0576	364668,0576	0.0020		Downhand
		B1/SB-F/TF/Fr14/PS/AWP2		Fillet Joint	970	76.8	76.8	37248	37248	0.0002		Downhand
		B1/SB-F/TF/Fr14.6/PS/A/WF		Fillet Joint	970	76.8	76.8	37248	37248	0.0002		Downhand
		B1/SB-F/TF/Fr16/PS/A/WP3		Fillet Joint	1142	76.8	76.8	43852,8	43852,8	0.0002		Downhand
		B1/SB-LC/B/Sb/SA2/		Fillet Joint	9496,564	76.8	76.8	364668,0576	364668,0576	0.0020		Downhand
3	Panel Tank Top	B1/SB-F/TF/Fr14/Sb/AWP	Starboard Panel SA	Fillet Joint	970	30	30	14550	14550	0.0001		Downhand
		B1/SB-F/TF/Fr14.6/Sb/A/WF		Fillet Joint	970	76.8	76.8	37248	37248	0.0002		Downhand
		B1/SB-F/TF/Fr16/Sb/A/WP3		Fillet Joint	1142	76.8	76.8	43852,8	43852,8	0.0002		Downhand
		B1/SB-LC/B/Sb/SA2/		Fillet Joint	9496,564	76.8	76.8	364668,0576	364668,0576	0.0020		Downhand
		B1/SB-F/TF/Fr14/PS/SA/		Fillet Joint	2959,994	76.8	76.8	113663,7696	113663,7696	0.0006		Downhand
4	Panel Centerline-A1 B1	B1/SB-F/TF/Fr14.6/PS/SA/	Portside Panel SA	Fillet Joint	3289,818	76.8	76.8	126329,0112	126329,0112	0.0007		Downhand
		B1/SB-F/TF/Fr15/PS/SA/		Fillet Joint	3270	76.8	76.8	125568	125568	0.0007		Downhand
		B1/SB-F/TF/Fr16/PS/SA/		Fillet Joint	3390,404	76.8	76.8	130191,5136	130191,5136	0.0007		Downhand
		B1/SB-F/TF/Fr14/Sb/AWP		Fillet Joint	2523,666	76.8	76.8	96908,7744	96908,7744	0.0005		Downhand
		B1/SB-F/TF/Fr14.6/Sb/SA/		Fillet Joint	3289,818	76.8	76.8	126329,0112	126329,0112	0.0007		Downhand
5	Panel Centerline-A1 B1	B1/SB-F/TF/Fr15/Sb/SA/	Starboard Panel SA	Fillet Joint	3270	76.8	76.8	125568	125568	0.0007		Downhand
		B1/SB-F/TF/Fr16/Sb/SA/		Fillet Joint	3390,404	76.8	76.8	130191,5136	130191,5136	0.0007		Downhand
		B1/SB-F/TF/Fr14/PS/SA/		Fillet Joint	4300,858	10.8	10.8	23224,6332	23224,6332	0.0001		Downhand
		B1/SB-F/TF/Fr14.6/PS/SB/		Fillet Joint	3936,53	76.8	76.8	151162,752	151162,752	0.0008		Downhand
		B1/SB-F/TF/Fr15/PS/SB/		Fillet Joint	3976,494	76.8	76.8	151162,752	151162,752	0.0008		Downhand
6	Panel Tank Top	B1/SB-F/TF/Fr16/PS/SB/	Portside Panel SB	Fillet Joint	2970	76.8	76.8	114048	114048	0.0006		Downhand
		B1/TT/SB/PS/Bracket/1		Fillet Joint	1352,586	10.8	10.8	7303,9644	7303,9644	0.0000		Downhand
		B1/TT/SB/PS/Bracket/2		Fillet Joint	1155,818	10.8	10.8	6241,4172	6241,4172	0.0000		Downhand
		B1/TT/SB/PS/Bracket/3		Fillet Joint	755,466	10.8	10.8	4079,5164	4079,5164	0.0000		Downhand
		B1/SB-F/TF/Fr14/Sb/SB/		Fillet Joint	4300,858	10.8	10.8	23224,6332	23224,6332	0.0001		Downhand
7	Panel Tank Top	B1/SB-F/TF/Fr14.6/Sb/SS1/F	Starboard Panel SB	Fillet Joint	3936,53	76.8	76.8	151162,752	151162,752	0.0008		Downhand
		B1/SB-F/TF/Fr15/Sb/SB/		Fillet Joint	3976,494	76.8	76.8	151162,752	151162,752	0.0008		Downhand
		B1/SB-F/TF/Fr16/Sb/SB/		Fillet Joint	2970	76.8	76.8	114048	114048	0.0006		Downhand
		B1/TT/SB/Sb/Bracket/1		Fillet Joint	1352,586	10.8	10.8	7303,9644	7303,9644	0.00004	0.000566974	Downhand
		B1/TT/SB/Sb/Bracket/2		Fillet Joint	1155,818	10.8	10.8	6241,4172	6241,4172	0.00003	0.00048038	Downhand
8	Portside Panel SA	B1/TT/SB/Sb/Bracket/3	Portside Panel SB	Fillet Joint	755,466	10.8	10.8	4079,5164	4079,5164	0.00002	0.00029798	Downhand
		B1/SB-F/TF/Fr14/PS/SB/		Fillet Joint	3188,1	10.8	10.8	17215,74	17215,74	0.0001		Downhand
		B1/SB-F/TF/Fr14.6/PS/SB/		Fillet Joint	3196,36	76.8	76.8	122740,224	122740,224	0.0007		Downhand
		B1/SB-F/TF/Fr15/PS/SB/		Fillet Joint	3218,274	76.8	76.8	17378,6796	17378,6796	0.0001		Downhand
		B1/SB-F/TF/Fr16/PS/SB/		Fillet Joint	2213,598	76.8	76.8	85002,1632	85002,1632	0.0005		Downhand
9	Starboard Panel SA	B1/SB-F/TF/Fr14/Sb/SB/	Starboard Panel SB	Fillet Joint	3188,1	10.8	10.8	17215,74	17215,74	0.0001		Downhand
		B1/SB-F/TF/Fr14.6/Sb/SS1/F		Fillet Joint	3196,36	76.8	76.8	122740,224	122740,224	0.0007		Downhand
		B1/SB-F/TF/Fr15/Sb/SB/		Fillet Joint	3218,274	76.8	76.8	17378,6796	17378,6796	0.0001		Downhand
		B1/SB-F/TF/Fr16/Sb/SB/		Fillet Joint	2213,598	76.8	76.8	85002,1632	85002,1632	0.0005		Downhand
		Total 9				136597,4000					0,0216	0,0013
Sub Blok Side Shell Portside and Starboard												
Weld Item				Luas Penampang Kampuh Las		Volume Pengelasan						



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
Komponen	Panel/Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)	Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
1	Tank Top Wing Tank	Fillet Joint	B1/SB-LC/TTWgT/Ps/S1	7200	10,8	10,8	38980	38980	0,0002	0,089359	Downhand	
			B1/SB-LC/TTWgT/Ps/S2	7200	10,8	10,8	38980	38980	0,0002		Downhand	
			B1/SB-LC/TTWgT/Ps/S3	7200	10,8	10,8	38980	38980	0,0002		Downhand	
			B1/SB-LC/TTWgT/Ps/S4	7200	10,8	10,8	38980	38980	0,0002		Downhand	
			B1/SB-LC/B/Ps/SB2/FB2	Butt Joint	991,688	28,668	7,2	14214,85579	3570,0768		0,00005	0,051750
2	Long Bottom Section B2	Fillet Joint	B1/SB-LC/B/Ps/SB2/S1	7091,924	76,8	76,8	272329,8816	272329,8816	0,0015	0,008690	Downhand	
			B1/SB-LC/B/Ps/SB2/S2	1263,58	76,8	76,8	48521,472	48521,472	0,0003	0,001548	Downhand	
			B1/SB-LC/B/Ps/SB2/S3	903,54	76,8	76,8	34695,936	34695,936	0,0002	0,000984	Downhand	
			B1/SB-LC/B/Ps/SB2/S4	903,54	76,8	76,8	34695,936	34695,936	0,0002	0,000984	Downhand	
			B1/SB-LC/B/Ps/SB2/S5	2173,198	30	30	32597,97	32597,97	0,0002	0,001894	Downhand	
3	Wing Tank Bulkhead FB2	Fillet Joint	B1/SB-LC/Bkh/Sb/S1	7188	10,8	10,8	38815,2	38815,2	0,0002	0,0063	Downhand	
			B1/SB-LC/Bkh/Sb/S2	7188	10,8	10,8	38815,2	38815,2	0,0002	0,0063	Downhand	
			B1/SB-LC/Bkh/Sb/S3	7188	10,8	10,8	38815,2	38815,2	0,0002	0,0063	Downhand	
			B1/SB-LC/Bkh/Sb/S4	7188	10,8	10,8	38815,2	38815,2	0,0002	0,0063	Downhand	
4	B1/SB-F/TF/Fr14/Ps/SS1/WP	Fillet Joint	B1/SB-F/TF/Fr14/Ps/SS1/FP	6385,389	30	30	95780,835	95780,835	0,0005	0,020432121	Downhand	
			B1/SB-F/TF/Fr14,6/Ps/SS1/W	2232,5	76,8	76,8	85728	85728	0,0005	0,038118835	Downhand	
6	B1/SB-F/TF/Fr15/Ps/SS1/WP	Fillet Joint	B1/SB-F/TF/Fr15/Ps/SS1/FP	6176,8752	30	30	92653,128	92653,128	0,0005	0,019951318	Downhand	
			B1/SB-F/TF/Fr16/Ps/SS1/WP	2174,414	76,8	76,8	83497,4976	83497,4976	0,0005	0,034852747	Downhand	
7	B1/SB-F/TF/Fr16/Ps/SS2/WP	Fillet Joint	B1/SB-F/TF/Fr16/Ps/SS1/FP	2174,414	76,8	76,8	83497,4976	83497,4976	0,0005	0,031290452	Downhand	
			B1/SB-F/TF/Fr16/Ps/S1	1885,16	10,8	10,8	10179,864	10179,864	0,0001	0,001663905	Downhand	
			B1/SB-F/TF/Fr16/Ps/S2	1879,946	10,8	10,8	10151,7084	10151,7084	0,0001	0,001659303	Downhand	
			B1/SB-F/TF/Fr16/Ps/S3	1879,946	10,8	10,8	10151,7084	10151,7084	0,0001	0,001659303	Downhand	
Total			95668,1142					0,0066	0,3302			
Total 10			191336,2284					0,013224573	0,660430141	660,430141		
Assembly Sub Blok Side Shell Portside												
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Penambahan Berat Bracket (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B1/SB-LC/Bkh/Sb/FB2	B1/SB-LC/B/Ps/SB2/FB1	Long Bulkhead Wing Tank	Butt Joint	7220	28,668	7,2	103491,48	25992	0,0004		Downhand
2	Long Bulkhead Wing Tank	Fillet Joint	Transverse Frame 14 PortsideSide Shell 1	5103,48	10,8	10,8	27558,792	27558,792	0,0002			Downhand
			Transverse Frame 14,6 PortsideSide Shell 1	1625,69	10,8	10,8	8778,726	8778,726	0,0000			Downhand
			Transverse Frame 15 PortsideSide Shell 1	4644,972	10,8	10,8	25082,8488	25082,8488	0,0001			Downhand
			Transverse Frame 16 PortsideSide Shell 1Side Shell 2	3406,278	10,8	10,8	18393,9012	18393,9012	0,0001			Downhand
			B1/LBkh/TF16/Ps/Bracket/1	771	10,8	10,8	4163,4	4163,4	0,0000	0,000304282		Downhand
			B1/LBkh/TF16/Ps/Bracket/2	771	10,8	10,8	4163,4	4163,4	0,0000	0,000304282		Downhand
			B1/LBkh/TF16/Ps/Bracket/3	771	10,8	10,8	4163,4	4163,4	0,0000	0,000304282		Downhand
3	Tank Top Wing Tank	Fillet Joint	Transverse Frame 14 PortsideSide Shell 1	3656,512	10,8	10,8	19745,1648	19745,1648	0,0001			Downhand
			Transverse Frame 15 PortsideSide Shell 1	3645,776	10,8	10,8	19687,1904	19687,1904	0,0001			Downhand
			Transverse Frame 16 PortsideSide Shell 1Side Shell 2	2456,128	10,8	10,8	13263,0912	13263,0912	0,0001			Downhand
			B1/TTW/TF16/Bracket/1	600	10,8	10,8	3240	3240	0,0000			Downhand
			B1/TTW/TF16/Bracket/2	600	10,8	10,8	3240	3240	0,0000			Downhand
			B1/TTW/TF16/Bracket/3	600	10,8	10,8	3240	3240	0,0000			Downhand
			Total	35871,8360							0,0012	0,0009
Total 11			71743,672					0,002390376	0,001825692			
Sub Blok Main Deck												
Portside and Starboard												
No.	Weld Item		Panel/Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Komponen	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B1/SB-D/MP/P1	B1/SB-D/MP/P2	B1/SB-D/MP/	Butt Joint	1352	28,668	7,2	19379,568	4867,2	0,0001		Downhand
				Butt Joint	2578,14	35,32056	10,8	45530,67428	13921,956	0,0002		Downhand
				Butt Joint	9020,068	28,668	7,2	129293,6547	32472,2448	0,0004		Downhand
				Butt Joint	1599,826	17,04	7,2	13630,51752	5759,3736	0,0001		Downhand
				Butt Joint	2555,444	17,04	7,2	21772,38288	9199,5984	0,0001		Downhand
				Butt Joint	1352	17,04	7,2	11519,04	4867,2	0,0000		Downhand
				Butt Joint	1400	17,04	7,2	11928	5040	0,0000		Downhand
				Butt Joint	8912	17,04	7,2	75930,24	32083,2	0,0003	0,6354	Downhand
				Butt Joint	4332	17,04	7,2	36908,64	15595,2	0,0001		Downhand
				Butt Joint	2372	17,04	7,2	20209,44	8539,2	0,0001		Downhand



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi			
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)						
B1/SB-D/MP/P/8	B1/SB-D/MP/	Butt Join	4332	17,04	7,2	36908,64	15595,2	0,0001		Downhand			
B1/SB-D/MP/P/8		Butt Join	2372	17,04	7,2	20209,44	8539,2	0,0001		Downhand			
B1/SB-D/MP/P/9		Butt Join	11772	17,04	7,2	100297,44	42379,2	0,0004		Downhand			
B1/SB-D/MP/P/10		Butt Join	12553,614	28,668	7,2	179943,5031	45193,0104	0,0006		Downhand			
B1/SB-D/LDG/C/1		B1/SB-D/LDG/	Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/2			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/3			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/4			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/5			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/6			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/7			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/8			Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand		
B1/SB-D/LDG/C/9	Fillet Join		1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand			
B1/SB-D/LDG/C/10	Fillet Join		1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand			
B1/SB-D/LDG/C/11	Fillet Join		1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand			
B1/SB-D/LDG/C/12	Fillet Join		1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand			
B1/SB-D/LDG/C/13	Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand				
B1/SB-D/LDG/C/14	Fillet Join	1761,818	10,8	19027,63636	0	0,0001	0,002118		Downhand				
B1/SB-D/LDG/Ps/1	Long Stiffener Main Deck	Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/2		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/3		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/4		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/5		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/6		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/7		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Ps/8		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Sb/1		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Sb/2		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Sb/3		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Sb/4		Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand			
B1/SB-D/LDG/Sb/5	Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand				
B1/SB-D/LDG/Sb/6	Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand				
B1/SB-D/LDG/Sb/7	Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand				
B1/SB-D/LDG/Sb/8	Fillet Join	5907,273	10,8	63798,54545	0	0,0002	0,008473		Downhand				
Total 12			185684,9102					0,00614	0,800663	800,6631371			
Panel Transverse Deck Beam, Longitudinal Deck Beam, Transverse Wing Tank, dan Side Shell 3													
No.	Komponen	Weld Item	Komponen	Panel/Sub Panel	Sambungan Las	Panjang Pengelasan	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
							Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
Panel Longitudinal Deck Beam													
1	B1/SB-LC/D/Ps/WP	B1/SB-LC/D/Ps/FP	Long Deck Beam	Long Deck Beam	Fillet Join	9570,412	76,8	76,8	367503,8208	367503,8208	0,0020	0,062579	Downhand
2	B1/SB-LC/D/Ps/	B1/SB-LC/D/Ps/TrB1			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
		B1/SB-LC/D/Ps/TrB2			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
		B1/SB-LC/D/Ps/TrB3			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
		B1/SB-LC/D/Ps/TrB4			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
		B1/SB-LC/D/Ps/TrB5			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
		B1/SB-LC/D/Ps/TrB6			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
		B1/SB-LC/D/Ps/TrB7			Fillet Join	319,422	30	4791,33	0,000026	0,000157	Downhand		
Panel Transverse Deck Beam													
1	B1/SB-D/TDB/Fr14/C/WP	B1/SB-D/TDB/Fr14/C/FP	B1/SB-D/TDB/Fr14/C/	Fillet Join	4542,898	30	30	68143,47	68143,47	0,0004	0,017939	Downhand	
2	B1/SB-D/TDB/Fr14/Ps/WP	B1/SB-D/TDB/Fr14/Ps/FP	B1/SB-D/TDB/Fr14/Ps/	Fillet Join	2751,774	30	30	41276,61	41276,61	0,0002	0,011531	Downhand	
3	B1/SB-D/TDB/Fr15/Ps/WP	B1/SB-D/TDB/Fr15/Ps/FP	B1/SB-D/TDB/Fr15/Ps/	Fillet Join	2956,056	30	30	44340,84	44340,84	0,0002	0,011703	Downhand	
4	B1/SB-D/TDB/Fr16/C/WP	B1/SB-D/TDB/Fr16/C/FP	B1/SB-D/TDB/Fr16/C/	Fillet Join	4563,642	30	30	68457,63	68457,63	0,0004	0,017968	Downhand	
5	B1/SB-D/TDB/Fr16/Ps/WP	B1/SB-D/TDB/Fr16/Ps/FP	B1/SB-D/TDB/Fr16/Ps/	Fillet Join	2624,62	30	30	39369,3	39369,3	0,0002	0,011228	Downhand	
Panel Frame Wing Tank													
1	B1/SB-F/TF/Fr14/Ps/SS2/WP	B1/SB-F/TF/Fr14/Ps/SS2/FP	Transverse Frame 14 Portside	Fillet Join	5593,96	10,8	10,8	30207,384	30207,384	0,0002	0,016368	Downhand	
2	B1/SB-F/TF/Fr15/Ps/SS2/WP	B1/SB-F/TF/Fr15/Ps/SS2/FP	Transverse Frame 15 Deckside	Fillet Join	5591,4594	10,8	10,8	30193,88076	30193,88076	0,0002	0,016464	Downhand	
3	B1/SB-F/TF/Fr16/Ps/SS3/WP	B1/SB-F/TF/Fr16/Ps/SS2/S1	Transverse Frame 16	Fillet Join	2381,372	30	30	35720,58	35720,58	0,0002	0,002115	Downhand	
		B1/SB-F/TF/Fr16/Ps/SS2/S2		Fillet Join	2396,242	30	30	35943,63	35943,63	0,0002	0,002125	Downhand	
		B1/SB-F/TF/Fr16/Ps/SS2/S3		Fillet Join	2407,492	30	30	36112,38	36112,38	0,0002	0,002125	Downhand	
Panel Long Bulkhead													
1	B1/SB-LC/Bkh/Ps/FB1	B1/SB-LC/Bkh/Ps/S4	Wing Tank Bulkhead	Fillet Join	7188	10,8	10,8	38815,2	38815,2	0,0002	0,006303	Downhand	
		B1/SB-LC/Bkh/Ps/S5		Fillet Join	5097,32	10,8	10,8	27525,528	27525,528	0,0001	0,004499	Downhand	
		B1/SB-LC/Bkh/Ps/S6		Fillet Join	1078,9	10,8	10,8	5826,06	5826,06	0,0000	0,000952	Downhand	
		B1/SB-LC/Bkh/Ps/S7		Fillet Join	1078,9	10,8	10,8	5826,06	5826,06	0,0000	0,000952	Downhand	
		B1/SB-LC/Bkh/Ps/S8		Fillet Join	7188	10,8	10,8	38815,2	38815,2	0,0002	0,006344	Downhand	
		B1/SB-LC/Bkh/Ps/S9		Fillet Join	7188	10,8	10,8	38815,2	38815,2	0,0002	0,006344	Downhand	



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
Total 13			143763,6628					0,010000	0,543361616			
									543,3616155			
Weld Item												
Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Penambahan Berat Bracket and Pillar(Ton)	Posisi		
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
B1/SB-LC/D/Ps/WP	Long Deck Beam	Fillet Join	9498,026	30	30	142470,39	142470,39	0,0008		Downhand		
B1/SB-D/TDB/Fr14/CJ/WP		Fillet Join	4653,03	30	30	69795,45	69795,45	0,0004		Downhand		
B1/SB-D/TDB/Fr14/Ps/WP		Fillet Join	3302,22	30	30	49533,3	49533,3	0,0003		Downhand		
B1/MP/LC/DB/Bracket/1		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/MP/LC/DB/Bracket/2		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/MP/LC/DB/Bracket/3		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/MP/LC/DB/Bracket/4		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/MP/LC/DB/Bracket/5		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/MP/LC/DB/Bracket/6		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/MP/LC/DB/Bracket/7		Fillet Join	657,752	10,8	10,8	3551,8608	3551,8608	0,00019	0,000330379	Downhand		
B1/SB-D/TDB/Fr15/Ps/WP		Fillet Join	3302,22	30	30	49533,3	49533,3	0,000380		Downhand		
B1/SB-D/TDB/Fr16/CJ/WP		Fillet Join	4653,03	30	30	69795,45	69795,45	0,00270		Downhand		
B1/SB-D/TDB/Fr16/Ps/WP		Fillet Join	3302,22	30	30	49533,3	49533,3	0,00074		Downhand		
B1/SB-F/TF/Fr14/Ps/SS2/WP		Fillet Join	2533,196	10,8	10,8	13679,2584	13679,2584	0,00074		Downhand		
B1/SB-F/TF/Fr15/Ps/SS2/WP		Fillet Join	2533,196	10,8	10,8	13679,2584	13679,2584	0,00220		Downhand		
B1/SB-F/TF/Fr16/Ps/SS3/WP		Fillet Join	2688,75	30	30	40331,25	40331,25	0,00056		Downhand		
B1/SB-D/TDB/Fr14/CJ/WP		Fillet Join	686	30	30	10290	10290	0,00056		Downhand		
B1/SB-D/TDB/Fr14/Ps/WP		Fillet Join	686	30	30	10290	10290	0,00056		Downhand		
B1/SB-D/TDB/Fr15/Ps/WP		Fillet Join	686	30	30	10290	10290	0,00056		Downhand		
B1/SB-D/TDB/Fr16/CJ/WP		Fillet Join	686	30	30	10290	10290	0,00056		Downhand		
B1/SB-D/TDB/Fr16/Ps/WP		Fillet Join	686	30	30	10290	10290	0,00085		Downhand		
B1/SB-D/TDB/Fr14/Ps/WP		Fillet Join	1038,75	30	30	15581,25	15581,25	0,00085		Downhand		
B1/SB-D/TDB/Fr15/Ps/WP		Fillet Join	1038,75	30	30	15581,25	15581,25	0,00085		Downhand		
B1/SB-D/TDB/Fr16/Ps/WP		Fillet Join	1038,75	30	30	15581,25	15581,25	0,00084		Downhand		
B1/SB-F/TF/Fr14/Ps/SS2/WP		Fillet Join	2845,94	10,8	10,8	15368,076	15368,076	0,00084		Downhand		
B1/SB-F/TF/Fr15/Ps/SS2/WP		Fillet Join	2845,94	10,8	10,8	15368,076	15368,076	0,00162		Downhand		
B1/SB-F/TF/Fr16/Ps/SS3/WP		Fillet Join	1988,66	30	30	29829,9	29829,9	0,00018		Downhand		
B1/MP/TF-16/Bracket/1		Fillet Join	800	10,8	10,8	3240	3240	0,00018	0,000177849	Downhand		
B1/MP/TF-16/Bracket/2		Fillet Join	800	10,8	10,8	3240	3240	0,00018	0,000177849	Downhand		
B1/MP/TF-16/Bracket/3		Fillet Join	600	10,8	10,8	3240	3240	0,00018	0,000177849	Downhand		
Total 14			103515,824					0,006267759	0,002846			
Sub Blok Keel Plate												
No.	Weld Item			Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Panel	Komponen	Panel			Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B1/SB-LC/B/CIK1	B1/SB-LC/B/CIK2	Keel Plate	Butt Join	300	76,764	30,228	11514,6	4534,2	0,000044	0,031455	Vertical
Total 15					300					0,0000437	0,03145523	
											31,45522999	
Sub Blok Plat Bottom												
No.	Weld Item			Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat (Ton)	Berat Konstruksi (Ton)	Posisi
	Panel	Komponen	Panel			Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B1/SB-SS/B/Ps/1	B1/SB-SS/B/Ps/2	Plat Bottom	Butt Join	2110,41	59,148	10,8	62413,26534	11396,214	0,000201	0,5027	Downhand
2	B1/SB-SS/B/Ps/3	B1/SB-SS/B/Ps/4		Butt Join	3764,338	59,148	10,8	111326,532	20327,4252	0,000358		Downhand
3	B1/SB-SS/B/Ps/5	B1/SB-SS/B/Ps/6		Butt Join	1925,308	59,148	10,8	56939,05879	10396,6632	0,000183		Downhand
4	B1/SB-SS/B/Ps/1	B1/SB-SS/B/Ps/3		Butt Join	200	57,34152	17,028	5734,152	1702,8	0,000020		Downhand
5	B1/SB-SS/B/Ps/1	B1/SB-SS/B/Ps/4		Butt Join	100	59,148	10,8	2957,4	540	0,000010		Downhand
6	B1/SB-SS/B/Ps/2	B1/SB-SS/B/Ps/4		Butt Join	11400,3	35,316	10,8	201306,4974	61561,62	0,000716		Downhand
7	B1/SB-SS/B/Ps/3	B1/SB-SS/B/Ps/5		Butt Join	200	57,34152	17,028	5734,152	1702,8	0,000020		Downhand
8	B1/SB-SS/B/Ps/4	B1/SB-SS/B/Ps/6		Butt Join	11406,84	35,316	10,8	201421,9807	61596,936	0,000716		Downhand
9	B1/SB-SS/B/Ps/4	B1/SB-SS/B/Ps/5		Butt Join	100	59,148	10,8	2957,4	540	0,000010		Downhand
Total 16					62414,392					0,004468742	1,005353488	
Sub Blok Plat Side Shell												
No.	Weld Item			Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Panel	Komponen	Panel			Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las			Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi					
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)		Volume I (mm ³)	Volume II (mm ³)								
B1/SB-SS/S/Ps/2	Side Shell Plate	Butt Join	2100	21,084		9	22138,2	9450	0,000086	0,2566	Downhand					
B1/SB-SS/S/Ps/3		Butt Join	3100,374	21,084		9	32684,14271	13951,683	0,000127		Downhand					
B1/SB-SS/S/Ps/3		Butt Join	813,266	21,084		9	8573,450172	3659,697	0,000033		Downhand					
B1/SB-SS/S/Ps/4		Butt Join	2100	21,084		9	22138,2	9450	0,000086		Downhand					
B1/SB-SS/S/Ps/4		Butt Join	7800,208	21,084		9	82229,79274	35100,936	0,000319		Downhand					
Total 17			31827,696						0,001303642	0,513136855						
Weld Item																
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las			Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi dan Penambahan Berat Bracket atau Pilar(Ton))	Posisi			
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)		Volume I (mm ³)	Volume II (mm ³)						
1	Keel Plate	B1/SB-F/TF/Fr14/C/IB/W/P	Sub Blok Bottom	Fillet Join	345,4	10,8		10,8	1865,16	1865,16	0,000010		Vertical			
		B1/SB-F/TF/Fr14.6/C/IB/W/P1		Fillet Join	348,172	76,8		76,8	13369,8048	13369,8048	0,000073		Vertical			
		B1/SB-F/TF/Fr15/C/IB/W/P		Fillet Join	347,134	10,8		10,8	1874,5236	1874,5236	0,000010		Vertical			
		B1/SB-F/TF/Fr16/C/IB/W/P1		Fillet Join	519,414	76,8		76,8	19945,4976	19945,4976	0,000109		Vertical			
3	Sub Blok Transverse Bulkhead Fr13	B1/S-TB/Fr13/P1	Sub Blok Bottom	Fillet Join	544,054	30		30	8160,81	8160,81	0,000044		Downhand			
		Panel Tank Top		Fillet Join	13600	30		30	204000	204000	0,001111		Downhand			
		B1/Fr13-TT/Bracket/1		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/2		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/3		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/4		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/5		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/6		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/7		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/8		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/9		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/10		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/11		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-TT/Bracket/12		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		4		Sub Blok Transverse Bulkhead Fr13	Panel Centerline-A1 B1	Sub Blok Bottom	Fillet Join	2473,456	30		30	37101,84	37101,84	0,000202		Vertical
					Panel Centerline-A1 B1		Fillet Join	2473,456	30		30	37101,84	37101,84	0,000202		Vertical
					Portside Panel SA		Fillet Join	30		30				0,000178		Vertical
Starboard Panel SA	Fillet Join		2184,922				30		32773,83	32773,83	0,000178		Vertical			
Wing Tank Bulkhead FB2	Fillet Join		2184,922				30		32773,83	32773,83	0,000178		Vertical			
5	Sub Blok Side Shell	B1/SB-F/TF/Fr14/Ps/SB/	Sub Blok Side Shell	Fillet Join	1222,768	10,8		10,8	6602,9472	6602,9472	0,000036		Vertical			
		B1/SB-F/TF/Fr14.6/Ps/SB/		Fillet Join	1186,248	10,8		10,8	6405,7392	6405,7392	0,000035		Vertical			
		B1/SB-F/TF/Fr15/Ps/SB/		Fillet Join	1165,254	10,8		10,8	6292,3716	6292,3716	0,000034		Vertical			
		B1/SB-F/TF/Fr16/Ps/SB/		Fillet Join	1291,49	10,8		10,8	6974,046	6974,046	0,000038		Vertical			
6	Sub Blok Side Shell	Sub Blok Side Shell	Sub Blok Side Shell	Fillet Join	7469,936	10,8		10,8	40337,6544	40337,6544	0,000220		Vertical			
		Panel Tank Top		Fillet Join	516,684	10,8		10,8	2790,0936	2790,0936	0,000015		Vertical			
8	Sub Blok Transverse Bulkhead Fr13	Sub Blok Side Shell	Sub Blok Side Shell	Fillet Join	516,684	10,8		10,8	2790,0936	2790,0936	0,000015		Vertical			
		Wing Tank Bulkhead FB2		Fillet Join	2140	10,8		10,8	11556	11556	0,000063		Vertical			
		Tank Top Wing Tank		Fillet Join	2503,364	10,8		10,8	13518,1656	13518,1656	0,000074		Downhand			
		B1/Fr13-WT/SS/Bracket/1		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-WT/SS/Bracket/2		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-WT/SS/Bracket/3		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-WT/SS/Bracket/4		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
		B1/Fr13-WT/SS/Bracket/5		Fillet Join	600	10,8		10,8	3240	3240	0,000018	0,000177849	Vertical			
9	Sub Blok Transverse Bulkhead Fr17	Panel Centerline-A1 B1	Sub Blok Bottom	Fillet Join	2473,456	30		30	37101,84	37101,84	0,000202		Vertical			
		Panel Centerline-A1 B1		Fillet Join	2473,456	30		30	37101,84	37101,84	0,000202		Vertical			
		Portside Panel SA		Fillet Join	2184,922		30		32773,83	32773,83	0,000178		Vertical			
		Starboard Panel SA		Fillet Join	2184,922		30		32773,83	32773,83	0,000178		Vertical			
		Wing Tank Bulkhead FB2		Fillet Join	574,248	10,8		10,8	3100,9392	3100,9392	0,000017		Downhand			
11	Tank Top Wing Tank	Sub Blok Side Shell	Sub Blok Main Deck	Fillet Join	511,76	10,8		10,8	2763,504	2763,504	0,000015		Vertical			
		Panel Frame Wing Tank		Fillet Join	1222,768	10,8		10,8	6602,9472	6602,9472	0,000036		Downhand			
		B1/SB-F/TF/Fr15/Ps/SS2/WF		Fillet Join	1186,248	10,8		10,8	6405,7392	6405,7392	0,000035		Downhand			
		B1/SB-F/TF/Fr16/Ps/SS3/WF		Fillet Join	1165,254	10,8		10,8	6292,3716	6292,3716	0,000034		Downhand			
12	Sub Blok Side Shell	Panel Long Bulkhead	Sub Blok Main Deck	Fillet Join	7469,936	10,8		10,8	40337,6544	40337,6544	0,000220		Horizontal			
		Tank Top Wing Tank		Fillet Join	1458,032	30		30	21870,48	21870,48	0,000119		Overhead			
		Wing Tank Bulkhead		Fillet Join	2650,748	30		30	39761,22	39761,22	0,000217		Overhead			



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las			Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)		Volume I (mm ³)	Volume II (mm ³)			
14	Sub Blok Main Deck	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Vertical	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Vertical	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Vertical	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Vertical	
	Sub Blok Transverse Bulkhead Fr13	Main Deck Plat	Fillet Join	16000	30	30	240000	240000	0,001307		Overhead
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
15	Sub Blok Transverse Bulkhead Fr17	Main Deck Plat	Fillet Join	16000	30	30	240000	240000	0,001307		Overhead
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
		Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead	
	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead		
	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead		
	Fillet Join	828,906	10,8	10,8	4476,0924	4476,0924	0,000024	0,000433227	Overhead		
	Fillet Join	828,906	10,8	10,8	4476,0924	4476,0924	0,000024	0,000433227	Overhead		
	Fillet Join	828,906	10,8	10,8	4476,0924	4476,0924	0,000024	0,000433227	Overhead		
16	Sub Blok Transverse Bulkhead Fr13	Portside and Starboard									
		Fillet Join	1379,002	10,8	10,8	7446,6108	7446,6108	0,000041	0,000824429	Overhead	
		Fillet Join	1278,302	10,8	10,8	6902,8308	6902,8308	0,000038	0,000755878	Overhead	
		Fillet Join	1123,204	10,8	10,8	6065,3016	6065,3016	0,000033	0,000650295	Overhead	
		Fillet Join	1023,528	10,8	10,8	5527,0512	5527,0512	0,000030	0,00058244	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead	
		Fillet Join	949	10,8	10,8	5124,6	5124,6	0,000028	0,000507659	Overhead	
		Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000411857	Overhead	
		Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead	
		Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead	
	Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead		
	Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead		
	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead		
	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead		
	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead		
Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead			
Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead			
Portside and Starboard											
Fillet Join	1379,002	10,8	10,8	7446,6108	7446,6108	0,000041	0,000824429	Overhead			



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kumpuh Las			Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)		Volume I (mm ³)	Volume II (mm ³)			
18	Long Frame	B1/Fr17/LF/SS/Bracket2	Fillet Join	1278,302	10,8	10,8	6902,8308	6902,8308	0,000038	0,000755878	Overhead
		B1/Fr17/LF/SS/Bracket3	Fillet Join	1123,204	10,8	10,8	6065,3016	6065,3016	0,000033	0,000650295	Overhead
		B1/Fr17/LF/SS/Bracket4	Fillet Join	1023,528	10,8	10,8	5527,0512	5527,0512	0,000030	0,00058244	Overhead
		B1/Fr17/LF/SS/Bracket5	Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead
		B1/Fr17/LF/SS/Bracket6	Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead
		B1/Fr17/LF/SS/Bracket7	Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead
		B1/Fr17/LF/SS/Bracket8	Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead
		B1/Fr17/LF/SS/Bracket9	Fillet Join	814,514	10,8	10,8	4398,3756	4398,3756	0,000024	0,000424496	Overhead
		B1/Fr17/LF/SS/Bracket10	Fillet Join	949	10,8	10,8	5124,6	5124,6	0,000028	0,000507659	Overhead
		B1/Fr17/LF/SS/Bracket11	Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000411857	Overhead
		B1/Fr17/LF/SS/Bracket12	Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead
		B1/Fr17/LF/SS/Bracket13	Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead
		B1/Fr17/LF/SS/Bracket14	Fillet Join	876,766	10,8	10,8	4734,5364	4734,5364	0,000026	0,000371978	Overhead
		B1/Fr17/LF/SS/Bracket15	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead
		B1/Fr17/LF/SS/Bracket16	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead
		B1/Fr17/LF/SS/Bracket17	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead
		B1/Fr17/LF/SS/Bracket18	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead
		B1/Fr17/LF/SS/Bracket19	Fillet Join	464,368	10,8	10,8	2507,5872	2507,5872	0,000014	0,000192971	Overhead
		18	Long Frame	Portside and Starboard							
Transverse Frame 14	Fillet Join			3620,572	30	30	54308,58	54308,58	0,000296		Overhead
Transverse Frame 14,6	Fillet Join			2090,572	30	30	31358,58	31358,58	0,000171		Overhead
Transverse Frame 15	Fillet Join			3450,572	30	30	51758,58	51758,58	0,000282		Overhead
Transverse Frame 16	Fillet Join			380,104	30	30	5701,56	5701,56	0,000031		Overhead
19	Sub Blok Plat Bottom	Portside and Starboard									
		Transverse Bulkhead Fr 13	Fillet Join	7799,424	30	30	116991,36	116991,36	0,000637		Downhand
		Transverse Frame 14	Fillet Join	4037,238	30	30	60558,57	60558,57	0,000330		Downhand
		Transverse Frame 14,6	Fillet Join	5065,606	30	30	75984,09	75984,09	0,000414		Downhand
		Transverse Frame 15	Fillet Join	5136,624	30	30	77049,36	77049,36	0,000420		Downhand
		Transverse Frame 16	Fillet Join	7178,582	30	30	107678,73	107678,73	0,000586		Downhand
		Transverse Bulkhead Fr 17	Fillet Join	7830,916	30	30	117463,74	117463,74	0,000640		Downhand
20	Sub Blok Plat Side Shell	Portside and Starboard									
		Transverse Bulkhead Fr 13	Fillet Join	5708,696	30	30	85630,44	85630,44	0,000466		Downhand
		Transverse Frame 14	Fillet Join	4488,336	30	30	67325,04	67325,04	0,000367		Downhand
		Transverse Frame 15	Fillet Join	4536,518	30	30	68047,77	68047,77	0,000371		Downhand
		Transverse Frame 16	Fillet Join	5335,586	30	30	80033,79	80033,79	0,000436		Downhand
21	Sub Blok Plat Bottom	Portside and Starboard									
		Transverse Bulkhead Fr 13	Fillet Join	5708,696	30	30	85630,44	85630,44	0,000466		Downhand
		Transverse Frame 14	Fillet Join	4488,336	30	30	67325,04	67325,04	0,000367		Downhand
		Transverse Frame 15	Fillet Join	4536,518	30	30	68047,77	68047,77	0,000371		Downhand
		Transverse Frame 16	Fillet Join	5335,586	30	30	80033,79	80033,79	0,000436		Downhand
		Transverse Bulkhead Fr 17	Fillet Join	5308,214	30	30	79623,21	79623,21	0,000434		Downhand
		Portside and Starboard									
		B1/SB-F/LF/B/Ps/1	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand
		B1/SB-F/LF/B/Ps/2	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand
		B1/SB-F/LF/B/Ps/3	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand
		B1/SB-F/LF/B/Ps/4	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand
B1/SB-F/LF/B/Ps/5	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
B1/SB-F/LF/B/Ps/6	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
B1/SB-F/LF/B/Ps/7	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
B1/SB-F/LF/B/Ps/8	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
B1/SB-F/LF/B/Ps/9	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
B1/SB-F/LF/B/Ps/10	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
B1/SB-F/LF/B/Ps/11	Fillet Join	4663,636364	30		139909,0909	0	0,000381	0,012469162	Downhand		
22	Sub Blok Plat Side Shell	B1/SB-F/LF/Ss1/Ps/1	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/2	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/3	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/4	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/5	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/6	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/7	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/8	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/9	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/10	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
		B1/SB-F/LF/Ss1/Ps/11	Fillet Join	3420	10,8		36936	0	0,000101	0,008473279	Horizontal
23	Sub Blok Bottom	B1/SB-LC/TT/Ps/SA-1/PI	Fillet Join	1016		30	30480	15240	0,000124	0,016943834	Downhand
		B1/SB-LC/TT/Ps/SA-2/PI	Fillet Join	1016		30	30480	15240	0,000124	0,016943834	Overhead
24	Sub Blok Plat Bottom	Sub Blok Plat Side Shell	Plat Kulit	Butt Join	11716,162	16,957	12,79	99335,47952	74924,85599	0,000475	Horizontal
25	Sub Blok Plat Side Shell	Main Deck Plat	Main Deck Plat	Fillet Join	11788,61		30	176829,15	176829,15	0,000963	Horizontal
26	Keel Plate	B1/SB-SS/B/Ps/1	Sub Blok Plat Bottom	Fillet Join	11703,094	76,8	76,8	449398,8096	449398,8096	0,002447	Horizontal
Total 18				686490,246	5285,114	4422,38		0,045409551	0,547099178		



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
B2/S-TB/Fr22/P/2	Bulkhead Plate	Butt Joint	4127,39	17,04	7,2	35165,3628	14858,604	0,000136	0,294898	Downhand
B2/S-TB/Fr22/P/3			1844,572	17,04	7,2	15715,75344	6640,4592	0,000061		Downhand
B2/S-TB/Fr22/P/4			9218,29	17,04	7,2	78539,8308	33185,844	0,000304		Downhand
B2/S-TB/Fr22/P/5			3890,08	17,04	7,2	33143,4816	14004,288	0,000128		Downhand
B2/S-TB/Fr22/P/5			2644,122	17,04	7,2	22527,91944	9518,8392	0,000087		Downhand
B2/S-TB/Fr22/Si/Tb1	Plate Bulkhead and Stiffen	Fillet Joint	1274,61	30	30	38238,24545	0	0,000104	0,002784959	Downhand
B2/S-TB/Fr22/Si/Tb2			1975,86	30	30	59275,90909	0	0,000161	0,004788807	Downhand
B2/S-TB/Fr22/Si/Tb3			2144,14	30	30	64324,14545	0	0,000175	0,005269655	Downhand
B2/S-TB/Fr22/Si/Tb4			2274,92	30	30	68247,54545	0	0,000186	0,005643361	Downhand
B2/S-TB/Fr22/Si/Tb5			2404,59	30	30	72137,67273	0	0,000196	0,006013897	Downhand
B2/S-TB/Fr22/Si/Tb6			2536,99	30	30	76109,72727	0	0,000207	0,006392238	Downhand
B2/S-TB/Fr22/Si/Tb7			2662,85	30	30	79885,63636	0	0,000218	0,006751895	Downhand
B2/S-TB/Fr22/Si/Tb8			2297,27	30	30	68918,18182	0	0,000188	0,005707239	Downhand
B2/S-TB/Fr22/Si/Tb9			2297,27	30	30	68918,18182	0	0,000188	0,005707239	Downhand
B2/S-TB/Fr22/Si/Tb10			2297,27	30	30	68918,18182	0	0,000188	0,005707239	Downhand
B2/S-TB/Fr22/Si/Tb11			2297,27	30	30	68918,18182	0	0,000188	0,005707239	Downhand
B2/S-TB/Fr22/Si/Tb12			2297,27	30	30	68918,18182	0	0,000188	0,005707239	Downhand
B2/S-TB/Fr22/Si/Tb13			2297,27	30	30	68918,18182	0	0,000188	0,005707239	Downhand
B2/S-TB/Fr22/Si/Tb14			2662,85	30	30	79885,63636	0	0,000218	0,006751895	Downhand
B2/S-TB/Fr22/Si/Tb15			2536,99	30	30	76109,72727	0	0,000207	0,006392238	Downhand
B2/S-TB/Fr22/Si/Tb16			2404,59	30	30	72137,67273	0	0,000196	0,006013897	Downhand
B2/S-TB/Fr22/Si/Tb17			2274,92	30	30	68247,54545	0	0,000186	0,005643361	Downhand
B2/S-TB/Fr22/Si/Tb18			2144,14	30	30	64324,14545	0	0,000175	0,005269655	Downhand
B2/S-TB/Fr22/Si/Tb19			1975,86	30	30	59275,90909	0	0,000161	0,004788807	Downhand
B2/S-TB/Fr22/Si/Tb20			1274,61	30	30	38238,24545	0	0,000104	0,002784959	Downhand
B2/SB-LC/D/SA-3/Ps/WP		Fillet Joint	4446,76	30	30	66701,4	66701,4	0,000363	0,015157947	Downhand
B2/SB-LC/D/SA-3/Sb/WP		Fillet Joint	4446,76	30	30	66701,4	66701,4	0,000363	0,015157947	Downhand
B2/SB-LC/D/SA-3/Ps/WP		Fillet Joint	4274	30	30	64110	64110	0,000349		Downhand
B2/SB-LC/D/SA-3/Sb/WP		Fillet Joint	4274	30	30	64110	64110	0,000349		Downhand
Total 1			83497,5368					0,0058	0,4347	

Sub Blok Bottom
 Panel Panel Bottom
 Join Sub Panel

No.	Weld Item		Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Komponen	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B2/SB-B/TT/P1	B2/SB-B/TT/P2		Butt Joint	1344	35,316	10,8	23732,352	7257,6	0,000084	0,198617	Downhand
	B2/SB-B/TT/P2	B2/SB-B/TT/P3			3612	28,668	7,2	51774,408	13003,2	0,000176		Downhand
	B2/SB-B/TT/P2	B2/SB-B/TT/P4			1412	28,668	7,2	20239,608	5083,2	0,000069		Downhand
	B2/SB-B/TT/P3	B2/SB-B/TT/P4			9695	17,04	7,2	82601,4	34902	0,000320		Downhand
2	B2/SB-B/TT/Sf1	B2/SB-B/TT/Sf2	Tank Top Plate	Fillet Joint	6598,832	30	30	98982,48	98982,48	0,000539	0,005749958	Downhand
	B2/SB-B/TT/Sf2	B2/SB-B/TT/Sf3			6598,832	30	30	98982,48	98982,48	0,000539	0,005749958	Downhand
	B2/SB-B/TT/Sf3	B2/SB-B/TT/Sf4			1364,82	30	30	20472,3	20472,3	0,000111	0,001114921	Downhand
	B2/SB-B/TT/Sf4	B2/SB-B/TT/Bp1			1364,82	30	30	20472,3	20472,3	0,000111	0,001114921	Downhand
3	B2/SB-B/TT/Bp1	B2/SB-B/TT/Bp2	Tank Top Plate	Fillet Joint	9589,5	10,8	10,8	51783,3	51783,3	0,000282	0,008464011	Downhand
	B2/SB-B/TT/Bp2	B2/SB-B/TT/Bp3			9589,5	10,8	10,8	51783,3	51783,3	0,000282	0,008464011	Downhand
	B2/SB-B/TT/Bp3	B2/SB-B/TT/Bp4			7190	10,8	10,8	38826	38826	0,000211	0,006346133	Downhand
	B2/SB-B/TT/Bp4	B2/SB-B/TT/Bp5			9589,5	10,8	10,8	51783,3	51783,3	0,000282	0,008464011	Downhand
	B2/SB-B/TT/Bp5	B2/SB-B/TT/Bp6			9589,5	10,8	10,8	51783,3	51783,3	0,000282	0,008464011	Downhand
	B2/SB-B/TT/Bp6	B2/SB-B/TT/Bp7			9589,5	10,8	10,8	51783,3	51783,3	0,000282	0,008464011	Downhand
4	B2/SB-F/TF/Fr18/Ci/B/S1	B2/SB-F/TF/Fr18/Ci/B/S2	Transverse Bottom F 18	Fillet Joint	4780	30	30	71700	71700	0,000390478	0,004685738	Downhand
	B2/SB-F/TF/Fr18/Ci/B/S2	B2/SB-F/TF/Fr18/Ci/B/S3			4780	30	30	71700	71700	0,000390478	0,004685738	Downhand
	B2/SB-F/TF/Fr18/Ci/B/S3	B2/SB-F/TF/Fr18/Ci/B/S4			4780	30	30	71700	71700	0,000390478	0,004685738	Downhand
	B2/SB-F/TF/Fr18/Ci/B/S4	B2/SB-F/TF/Fr18/Ps/B/S1			4780	30	30	71700	71700	0,000390478	0,004685738	Downhand
	B2/SB-F/TF/Fr18/Ps/B/S1	B2/SB-F/TF/Fr18/Ps/B/S2			2699,72	30	30	40495,8	40495,8	0,00022054	0,002352428	Downhand
	B2/SB-F/TF/Fr18/Ps/B/S2	B2/SB-F/TF/Fr18/Ps/B/S3			1101,34	30	30	16520,1	16520,1	8,99685E-05	0,000959664	Downhand
	B2/SB-F/TF/Fr18/Ps/B/S3	B2/SB-F/TF/Fr18/Ps/B/S4			579,18	30	30	8687,7	8687,7	4,73132E-05	0,000504674	Downhand
	B2/SB-F/TF/Fr18/Ps/B/S4	B2/SB-F/TF/Fr18/Ps/B/S5			3017,68	30	30	45265,2	45265,2	0,000246514	0,002629486	Downhand
5	B2/SB-F/TF/Fr19/Ps/B/SA/S1	B2/SB-F/TF/Fr19/Ps/B/SA/S2	Transverse Bottom F 19	Fillet Joint	808,14	30	30	11222,1	11222,1	6,6017E-05	0,000704181	Downhand
	B2/SB-F/TF/Fr19/Ps/B/SA/S2	B2/SB-F/TF/Fr19/Ps/B/SA/S3			2557,818	30	30	38367,27	38367,27	0,000208948	0,013271328	Downhand
	B2/SB-F/TF/Fr19/Ps/B/SA/S3	B2/SB-F/TF/Fr20/Ps/B/SA/S1			1995,36	30	30	29930,4	29930,4	0,000163001	0,001738677	Downhand
	B2/SB-F/TF/Fr20/Ps/B/SA/S1	B2/SB-F/TF/Fr20/Ps/B/SA/S2			2204,354	30	30	33065,31	33065,31	0,000180074	0,001920786	Downhand
6	B2/SB-F/TF/Fr20/Ps/B/SA/S2	B2/SB-F/TF/Fr20/Ps/B/SA/S3	Transverse Bottom F 20	Fillet Joint	2564,238	30	30	38463,57	38463,57	0,000209473	0,021723436	Downhand
	B2/SB-F/TF/Fr20/Ps/B/SA/S3	B2/SB-F/TF/Fr21/Ps/B/SA/S1			1983,928	30	30	29758,92	29758,92	0,000162067	0,001728716	Downhand
	B2/SB-F/TF/Fr21/Ps/B/SA/S1	B2/SB-F/TF/Fr21/Ps/B/SA/S2			1321,388	30	30	19820,82	19820,82	0,000107944	0,001151405	Downhand
				Fillet Joint	2620,088	30	30	39301,32	39301,32	0,000214035	0,014510766	Downhand



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi				
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)							
11	B2/SB-LC/B/C/IC/TP2	Transverse Bottom F 21	Fillet Join	1972,944	30	30	29594,16	29594,16	0,00016117	0,001719144	Downhand			
			Fillet Join	1263,554	30	30	18953,31	18953,31	0,00010322	0,001101011	Downhand			
			Fillet Join	2204,354	30	30	33065,31	33065,31	0,000180074	0,001920786	Downhand			
			Fillet Join	5214,854	30	30	78222,81	78222,81	0,000426001	0,015800228	Downhand			
			Fillet Join	9116,194	30	30	136742,91	136742,91	0,000744702	0,076982066	Downhand			
	Tank Construction	Longitudinal Tank Bulkhead Portside	Fillet Join	9116,194	30	30	136742,91	136742,91	0,000744702	0,076982066	Downhand			
			Fillet Join	9116,194	30	30	136742,91	136742,91	0,000744702	0,076982066	Downhand			
			Fillet Join	9116,194	30	30	136742,91	136742,91	0,000744702	0,076982066	Downhand			
			Fillet Join	9116,194	30	30	136742,91	136742,91	0,000744702	0,076982066	Downhand			
			Fillet Join	6337,806	30	30	95067,09	95067,09	0,000517735	0,025243659	Downhand			
			Fillet Join	6819,388	30	30	102290,82	102290,82	0,000557076	0,005942142	Downhand			
Tank Construction	Tank Construction	Fillet Join	7263,932	30	30	108958,98	108958,98	0,000693391	0,0063295	Downhand				
		Fillet Join	7299,7	30	30	109495,5	109495,5	0,000696312	0,006360667	Downhand				
		Fillet Join	6904,638	30	30	103569,57	103569,57	0,00056404	0,006016425	Downhand				
		Fillet Join	6904,638	30	30	103569,57	103569,57	0,00056404	0,006016425	Downhand				
Join Panel														
1	Tank Top Plate	Tank Construction	Fillet Join	2270	10,8	10,8	12258	12258	6,67571E-05		Downhand			
			Fillet Join	9370	10,8	10,8	50598	50598	0,000275557		Downhand			
2	Tank Top Plate	Transverse Bottom F 18	Fillet Join	5024	10,8	10,8	27129,6	27129,6	0,000147748		Downhand			
			Fillet Join	449,73	10,8	10,8	2428,542	2428,542	1,32258E-05	0,000135993	Downhand			
			Fillet Join	449,73	10,8	10,8	2428,542	2428,542	1,32258E-05	0,000135993	Downhand			
			Fillet Join	449,73	10,8	10,8	2428,542	2428,542	1,32258E-05	0,000135993	Downhand			
			Fillet Join	449,73	10,8	10,8	2428,542	2428,542	1,32258E-05	0,000135993	Downhand			
			Fillet Join	449,73	10,8	10,8	2428,542	2428,542	1,32258E-05	0,000135993	Downhand			
			Fillet Join	449,73	10,8	10,8	2428,542	2428,542	1,32258E-05	0,000135993	Downhand			
3	Tank Top Plate	Transverse Bottom F 19	Fillet Join	4933,196	10,8	10,8	26639,2584	26639,2584	0,000145077		Downhand			
			Fillet Join	4910,794	10,8	10,8	26518,2876	26518,2876	0,000144419		Downhand			
			Fillet Join	4485,794	10,8	10,8	24223,2876	24223,2876	0,000131192		Downhand			
4	Tank Construction	Transverse Bottom F 18	Fillet Join	2728,292	10,8	10,8	14732,7768	14732,7768	8,02347E-05		Downhand			
			Fillet Join	4106,93	10,8	10,8	22177,422	22177,422	0,000120778		Downhand			
5	Longitudinal Tank Bulkhead Portside	Transverse Bottom F 19	Fillet Join	2712,704	10,8	10,8	14648,6016	14648,6016	7,97763E-05		Downhand			
			Fillet Join	2732,294	10,8	10,8	14759,7876	14759,7876	8,03818E-05		Downhand			
			Fillet Join	2748,586	10,8	10,8	14842,3644	14842,3644	8,08315E-05		Downhand			
6	Longitudinal Tank Bulkhead Portside	Transverse Bottom F 18	Fillet Join	2034,564	10,8	10,8	10986,6456	10986,6456	5,98333E-05		Downhand			
			Fillet Join	2194,564	10,8	10,8	11850,6456	11850,6456	6,45386E-05		Downhand			
			Fillet Join	600	10,8	10,8	3240	3240	1,7645E-05	0,000177849	Downhand			
			Fillet Join	600	10,8	10,8	3240	3240	1,7645E-05	0,000177849	Downhand			
			Fillet Join	600	10,8	10,8	3240	3240	1,7645E-05	0,000177849	Downhand			
			Fillet Join	600	10,8	10,8	3240	3240	1,7645E-05	0,000177849	Downhand			
			Fillet Join	2248,546	10,8	10,8	12142,1484	12142,1484	6,61261E-05		Downhand			
			Fillet Join	3269,734	10,8	10,8	17656,5636	17656,5636	9,61576E-05		Downhand			
			Fillet Join	3198,112	10,8	10,8	17269,8048	17269,8048	9,40514E-05		Downhand			
			Total 2				381038,564					0,022405056	1,184954837	

Sub Side Shell

Panel Panel Side Shell

Join Sub Panel

No.	Weld Item		Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
	Komponen	Komponen				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B2/SB-F/TF/F18/Ps/SS/WP	B2/SB-F/TF/F18/Ps/SS/FP	Transverse Frame 18	Fillet Join	9163,66	10,8	10,8	49483,764	49483,764	0,000269	0,020358683	Downhand
	B2/SB-F/TF/F19/Ps/SS/WP	B2/SB-F/TF/F19/Ps/SS/FP		Butt Join	631,906	17,04	7,2	5383,83912	2274,8616	0,000021	0,024200934	Downhand
2	B2/SB-F/TF/F19/Ps/SS/WP	Transverse Frame 19	Fillet Join	2531,86	10,8	10,8	13672,044	13672,044	0,000074	0,002206162	Downhand	
			Fillet Join	2694,348	10,8	10,8	14549,4792	14549,4792	0,000079	0,002347747	Downhand	
			Fillet Join	1502,916	10,8	10,8	8115,7464	8115,7464	0,000044	0,001309581	Downhand	
			Fillet Join	492,172	10,8	10,8	2657,7288	2657,7288	0,000014	0,000428859	Downhand	
			Fillet Join	2683,842	10,8	10,8	14492,7468	14492,7468	0,000079	0,002338593	Downhand	
			Fillet Join	701,082	10,8	10,8	3785,8428	3785,8428	0,000021	0,000610895	Downhand	
			Fillet Join	5570,506	10,8	10,8	30080,7324	30080,7324	0,000164	0,004853916	Downhand	
3	B2/SB-F/TF/F20/Ps/SS/WP	Transverse Frame 20	Butt Join	600	17,04	7,2	5112	2160	0,000020	0,02317621	Downhand	
			Fillet Join	2124,582	10,8	10,8	11472,7428	11472,7428	0,000062	0,001851276	Downhand	
			Fillet Join	970,962	10,8	10,8	5243,1948	5243,1948	0,000029	0,000846057	Downhand	
			Fillet Join	584,642	10,8	10,8	3157,0668	3157,0668	0,000017	0,000509434	Downhand	
			Fillet Join	2429,698	10,8	10,8	13120,3692	13120,3692	0,000071	0,002117142	Downhand	
			Fillet Join	786,774	10,8	10,8	4248,5796	4248,5796	0,000023	0,000685563	Downhand	
			Fillet Join	8859,848	10,8	10,8	47843,1792	47843,1792	0,000261	0,007201171	Downhand	
B2/SB-F/TF/F21/Ps/SS/WP	B2/SB-F/TF/F21/Ps/SS/FP	Butt Join	600	17,04	7,2	5112	2160	0,000020	0,022213096	Downhand		



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
B2/SB-FTF/F21/Ps/B/SB/S1	Transverse Frame 21	Fillet Join	2095,6	10,8	10,8	11316,24	11316,24	0,000062	0,001826022	Downhand
B2/SB-FTF/F21/Ps/B/SB/S2		Fillet Join	1906,298	10,8	10,8	10294,0092	10294,0092	0,000056	0,001661072	Downhand
B2/SB-FTF/F21/Ps/B/SB/S3		Fillet Join	869,84	10,8	10,8	4697,136	4697,136	0,000026	0,000757944	Downhand
B2/SB-FTF/F21/Ps/SS/FP		Fillet Join	8459,9	10,8	10,8	45683,46	45683,46	0,000249	0,007371618	Downhand
Total 3			112520,872	491,04	432			0,003322228	0,258783569	

No.	Komponen	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B2/SB-D/MP/	B2/SB-D/MP/1	Main Deck Plat	Butt Join	16024,512	17,04	7,2	136528,8422	57688,2432	0,000529	0,020159905	Downhand
		B2/SB-D/MP/2		Butt Join	11615,412	17,04	7,2	98963,31024	41815,4832	0,000383	0,227224128	Downhand
		B2/SB-D/MP/3		Butt Join	11614,442	17,04	7,2	98955,04584	41811,9912	0,000383	0,145327432	Downhand
		B2/SB-D/MP/4		Butt Join	7613,602	17,04	7,2	64867,88904	27408,9672	0,000251	0,141626898	Downhand
		B2/SB-D/MP/5		Butt Join	11615,242	17,04	7,2	98961,86184	41814,8712	0,000383	0,096761666	Downhand
		B2/SB-D/LDG/CI/1		Fillet Join	5556,798	10,8		60013,41382	0	0,000163	0,004998012	Downhand
		B2/SB-D/LDG/CI/2		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/CI/3		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/CI/4		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/CI/5		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/CI/6		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/CI/7		Fillet Join	4249,091	10,8		45890,18182	0	0,000125	0,003735468	Downhand
		B2/SB-D/LDG/CI/8		Fillet Join	4249,091	10,8		45890,18182	0	0,000125	0,003735468	Downhand
		B2/SB-D/LDG/CI/9		Fillet Join	2791,906	10,8		30152,58545	0	0,000082	0,002328609	Downhand
		B2/SB-D/LDG/CI/FB1		Fillet Join	857,879	10,8		9255,090909	0	0,000025	0,000339014	Downhand
		B2/SB-D/LDG/CI/FB2		Fillet Join	857,879	10,8		9255,090909	0	0,000025	0,000339014	Downhand
		B2/SB-D/LDG/PS/1		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/PS/2		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/PS/3		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/PS/4		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/PS/5		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/PS/6		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/PS/7		Fillet Join	4249,091	10,8		45890,18182	0	0,000125	0,003735468	Downhand
		B2/SB-D/LDG/PS/8		Fillet Join	4249,091	10,8		45890,18182	0	0,000125	0,003735468	Downhand
		B2/SB-D/LDG/Sb/1		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/Sb/2		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/Sb/3		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/Sb/4		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/Sb/5		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/Sb/6		Fillet Join	7012,727	10,8		75737,45455	0	0,000206	0,006403659	Downhand
		B2/SB-D/LDG/Sb/7		Fillet Join	4249,091	10,8		45890,18182	0	0,000125	0,003735468	Downhand
		B2/SB-D/LDG/Sb/8		Fillet Join	4249,091	10,8		45890,18182	0	0,000125	0,003735468	Downhand
		B2/MD-LDG/Bracket/1		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/2		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/3		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/4		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/5		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/6		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/7		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/8		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/9		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
		B2/MD-LDG/Bracket/10		Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand
B2/MD-LDG/Bracket/11	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/12	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/13	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/14	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/15	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/16	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/17	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/18	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/19	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/20	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/21	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/22	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/MD-LDG/Bracket/23	Fillet Join	533,096	10,8	10,8	2878,7184	2878,7184	0,000016	0,001138966	Downhand			
B2/SB-D/TDB/Fr18/CI/WP	Fillet Join	4383,94	30	30	65759,1	65759,1	0,000358	0,008357695	Downhand			



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
B2/SB-SS/S/PS/2		Butt Join	9402,542	21,084		99121,59776	42311,439	0,000385	0,1377	Downhand
Total 7			18805,084					0,00070244	0,275406034	

Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi dan Penambahan Berat Bracket atau Pilar(Ton)	Posisi		
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
1 Sub Blok Keel Plate	Sub Blok BottomTank Construction	Fillet Join	2390,23	10,8	10,8	12907,242	12907,242	0,000070		Horizontal		
		Fillet Join	9590,31	10,8	10,8	51787,674	51787,674	0,000282		Horizontal		
		Fillet Join	260,821	10,8	10,8	1408,4334	1408,4334	0,000008		Vertical		
2 Sub Blok Keel Plate	Sub Blok Bottom	Portside and Starboard		Portside and Starboard		Portside and Starboard						
		Fillet Join	170,588	10,8	10,8	921,1752	921,1752	0,000005		Vertical		
		Fillet Join	171,34	10,8	10,8	925,236	925,236	0,000005		Vertical		
3 Sub Blok Bottom	Sub Side Shell	Butt Join	172,233	10,8	10,8	930,0582	930,0582	0,000005		Vertical		
		Butt Join	953,856	17,04	7,2	8126,85312	3433,8816	0,000031		Vertical		
		Fillet Join	2037,51	10,8	10,8	11002,554	11002,554	0,000060		Vertical		
4 Sub Blok BottomLongitudinal Tank Bulkhead Portside	Sub Side Shell	Fillet Join	1980,642	10,8	10,8	10695,4668	10695,4668	0,000058		Vertical		
		Fillet Join	1908,596	10,8	10,8	10306,4184	10306,4184	0,000056		Vertical		
		Butt Join	160	28,668	7,2	2293,44	576	0,000008		Downhand		
5 Sub Blok BottomTank Top Plate	Sub Side Shell	Butt Join	160	28,668	7,2	2293,44	576	0,000008		Downhand		
		Butt Join	160	28,668	7,2	2293,44	576	0,000008		Downhand		
		Butt Join	160	28,668	7,2	2293,44	576	0,000008		Downhand		
6 Sub Side ShellTranverse Frame	Sub Main Deck	Butt Join	374	17,04	7,2	3186,48	1346,4	0,000012		Overhead		
		Butt Join	374	20,916	7,2	3911,292	1346,4	0,000014		Overhead		
		Butt Join	374	17,04	7,2	3186,48	1346,4	0,000012		Overhead		
		Butt Join	374	20,916	7,2	3911,292	1346,4	0,000014		Overhead		
		Butt Join	374	17,04	7,2	3186,48	1346,4	0,000012		Overhead		
		Butt Join	374	20,916	7,2	3911,292	1346,4	0,000014		Overhead		
		Butt Join	374	17,04	7,2	3186,48	1346,4	0,000012		Overhead		
		Butt Join	374	20,916	7,2	3911,292	1346,4	0,000014		Overhead		
		Butt Join	374	17,04	7,2	3186,48	1346,4	0,000012		Overhead		
		Butt Join	374	20,916	7,2	3911,292	1346,4	0,000014		Overhead		
		Butt Join	374	17,04	7,2	3186,48	1346,4	0,000012		Overhead		
		Butt Join	374	20,916	7,2	3911,292	1346,4	0,000014		Overhead		
7 Sub Blok Transverse Bulkhead Fr17	Sub Main Deck	Fillet Join	15891,608	10,8	10,8	85814,6832	85814,6832	0,000467		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Fillet Join	811,33	10,8	10,8	4381,182	4381,182	0,000024		Overhead		
		Portside and Starboard		Portside and Starboard								
		8 Long Frame Bottom Portside	Sub Side Shell	Fillet Join	2326,86	10,8	10,8	12565,044	12565,044	0,000068		Downhand
Fillet Join	828,198			10,8	10,8	4472,2692	4472,2692	0,000024	0,00039368	Overhead		
Fillet Join	1021,42			10,8	10,8	5515,668	5515,668	0,000030	0,000503623	Overhead		
Fillet Join	1198,598			10,8	10,8	6472,4292	6472,4292	0,000035	0,000604134	Overhead		
Fillet Join	1364,154			10,8	10,8	7366,4316	7366,4316	0,000040	0,000698053	Overhead		
Fillet Join	828,198			10,8	10,8	4472,2692	4472,2692	0,000024	0,000698056	Overhead		
Fillet Join	1021,42			10,8	10,8	5515,668	5515,668	0,000030	0,000698059	Overhead		
Fillet Join	1198,598			10,8	10,8	6472,4292	6472,4292	0,000035	0,000698062	Overhead		
Fillet Join	1364,154			10,8	10,8	7366,4316	7366,4316	0,000040	0,000698064	Overhead		
Fillet Join	3361,02			10,8	10,8	18149,508	18149,508	0,000099		Overhead		
Fillet Join	3361,02			10,8	10,8	18149,508	18149,508	0,000099		Overhead		



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
	B2/Fr22/LF/B/Bracket/11	Fillet Join	713,554	10,8	12,79	3853,1916	4563,17783	0,000023	0,000177849	Overhead
	B2/Fr22/LF/B/Bracket/12	Fillet Join	713,554	10,8	12,79	3853,1916	4563,17783	0,000023	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/13	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/14	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/15	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/16	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/17	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/18	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
	B2/Fr22/LF/SS/Bracket/19	Fillet Join	820,752	10,8	12,79	4432,0608	5248,70904	0,000026	0,000177849	Overhead
16	Sub Blok Plat Bottom	Transverse Frame 18	Fillet Join	5997,09	10,8	32384,286	41349,93555	0,000201		Downhand
		Transverse Frame 19	Fillet Join	4814,864	10,8	26000,2656	35605,91928	0,000168		Downhand
		Transverse Frame 20	Fillet Join	4737,772	10,8	25583,9688	37404,70994	0,000172		Downhand
		Transverse Frame 21	Fillet Join	5195,318	10,8	28054,7172	43614,69461	0,000195		Downhand
17	Sub Blok Plat Side Shell	Sub Blok Transverse Bulkhead Fr2	Fillet Join	7537,5	10,8	40702,5	67046,0625	0,000293		Downhand
		Transverse Frame 18	Fillet Join	4142,312	10,8	22368,4848	38917,02124	0,000167		Vertical
		Transverse Frame 19	Fillet Join	4033,166	10,8	21779,0964	39908,17757	0,000168		Vertical
		Transverse Frame 20	Fillet Join	4014,342	10,8	21677,4468	41729,08509	0,000173		Vertical
		Transverse Frame 21	Fillet Join	4090,576	10,8	21209,1104	44566,82552	0,000182		Vertical
18	Sub Blok Transverse Bulkhead Fr17	Sub Blok Transverse Bulkhead Fr2	Fillet Join	4812,76	10,8	25988,904	54841,4002	0,000220		Vertical
		B2/SB-LC/B/Ci/Tr/WP1	Fillet Join	2695,182	10,8	14553,9828	32059,18989	0,000127		Downhand
		B2/SB-LC/B/Ps/Bkh/WP1	Fillet Join	2064,566	10,8	11148,6564	25990,29557	0,000100		Downhand
		B2/SB-LC/B/Ps/Bkh/WP1	Fillet Join	2064,566	10,8	11148,6564	26622,57857	0,000103		Downhand
19	Sub Blok Transverse Bulkhead Fr22	Tank Top Plate	Fillet Join	5024	10,8	27129,6	67296,48	0,000257		Downhand
		B2/SB-LC/B/Ci/Tr/WP1	Fillet Join	4019,58	10,8	21705,732	55852,0641	0,000211		Downhand
		B2/SB-LC/B/Ps/Bkh/WP1	Fillet Join	1933,396	10,8	10440,3384	27831,23542	0,000104		Downhand
		B2/SB-LC/B/Ps/Bkh/WP1	Fillet Join	1933,396	10,8	29,79	10440,3384	28797,93342	0,000107	
20	Sub Blok Transverse Bulkhead Fr2	Tank Top Plate	Fillet Join	5024	10,8	27129,6	77344,48	0,000284		Downhand
21	Sub Blok Transverse Bulkhead Fr2	Main Deck Plat	Fillet Join	15974,562	10,8	31,79	86262,6348	253915,663	0,000226	Vertical
		Main Deck Plat	Butt Join	16024,512	17,04	7,2	136528,8422	57688,2432	0,000529	Vertical
22	Plat Bottom Blok 1	B2/SB-SS/B/Ps/1	Butt Join	2182,972	35,316	38546,91958	11788,0488	0,000137		Vertical
		B2/SB-SS/B/Ps/2	Butt Join	3761,376	35,316	66418,37741	20311,4304	0,000236		Vertical
		B2/SB-SS/B/Ps/3	Butt Join	1886,036	35,316	33303,62369	10184,5944	0,000118		Vertical
23	Plat Side Shell 1	B2/SB-SS/S/Ps/1	Butt Join	3549,904	21,084	9	37423,08797	15974,568	0,000145	Vertical
		B2/SB-SS/S/Ps/2	Butt Join	3770,788	21,084	9	39751,6471	16988,546	0,000154	Vertical
25	Sub Blok Plat Side Shell	Main Deck Plat	Fillet Join	11967,342	30	30	179510,13	179510,13	0,000978	Horizontal
26	Sub Blok Plat Bottom	B2/SB-LC/B/Ps/Bkh/WP1	Fillet Join	2270	10,8	12258	12258	0,000067		Horizontal
		B2/SB-LC/B/Ps/Bkh/WP2	Fillet Join	9590	10,8	51786	51786	0,000282		Horizontal
27	Sub Blok Keel Plate	Sub Blok Keel Plate	Fillet Join	10200,32	30	30	153004,8	153004,8	0,000833	Horizontal
Total 8				723710,6866				0,034490913	0,783995156	



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi				
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)							
3	Bulkhead Frame 2.5	B3/S-TB/Fr27.5/Ps/SS/WP	1291.99	20.916	7.2	13511.63142	4651.164	0.00049	0.052175333	Downhand				
		B3/S-TB/Fr27.5/Sb/SS/WP	1291.99	20.916	7.2	13511.63142	4651.164	0.00049	0.024024522	Downhand				
		B3/S-TB/Fr27.5/Ps/B/FP1	2816.322	10.8	10.8	15208.1388	15208.1388	0.00083	0.00245403	Downhand				
		B3/S-TB/Fr27.5/Ps/B/FP2	2816.322	10.8	10.8	15208.1388	15208.1388	0.00083	0.00245403	Downhand				
		B3/S-TB/Fr27.5/Ps/B/FP3	3900.426	10.8	10.8	21062.3004	21062.3004	0.00115	0.002549006	Downhand				
		B3/S-TB/Fr27.5/Sb/B/FP1	2816.322	10.8	10.8	15208.1388	15208.1388	0.00083	0.00245403	Downhand				
		B3/S-TB/Fr27.5/Sb/B/FP2	2816.322	10.8	10.8	15208.1388	15208.1388	0.00083	0.00245403	Downhand				
		B3/S-TB/Fr27.5/Sb/B/FP3	3900.426	10.8	10.8	21062.3004	21062.3004	0.00115	0.002549006	Downhand				
		B3/S-TB/Fr27.5/Ps/SS/WP	B3/S-TB/Fr27.5/Ps/SS/FP1	Fillet Joint	573.962	30	30	8609.43	8609.43	0.00047	0.000500189	Downhand		
4	B3/S-TB/Fr27.5/Sb/SS/WP	B3/S-TB/Fr27.5/Ps/SS/FP2	Fillet Joint	6739.864	30	30	101097.96	101097.96	0.000551	0.013213908	Downhand			
		B3/S-TB/Fr27.5/Sb/SS/FP1	Fillet Joint	573.962	30	30	8609.43	8609.43	0.00047	0.000500189	Downhand			
		B3/S-TB/Fr27.5/Sb/SS/FP2	Fillet Joint	6739.864	30	30	101097.96	101097.96	0.000551	0.013213908	Downhand			
5	Bulkhead Plate	B3/S-TB/Fr27.5/P1	Fillet Joint	4394	10.8	10.8	23727.6	23727.6	0.000129		Downhand			
		B3/S-TB/Fr27.5/P2	Fillet Joint	1580	10.8	10.8	8532	8532	0.000046		Downhand			
		B3/S-TB/Fr27.5/P2	B3/S-TB/Fr27.5/P4	Butt Joint	1301.58	13.32	5.4	8668.5228	3514.266	0.000033		Downhand		
		B3/S-TB/Fr27.5/P3	B3/S-TB/Fr27.5/P4	Butt Joint	1301.58	13.32	5.4	8668.5228	3514.266	0.000033		Downhand		
		B3/S-TB/Fr27.5/P4	Fillet Joint	2814	10.8	10.8	15195.6	15195.6	0.000083		Downhand			
		B3/S-TB/Fr27.5/P4	B3/S-TB/Fr27.5/Sb/SS/P1	Fillet Joint	2814	10.8	10.8	15195.6	15195.6	0.000083		Downhand		
		B3/S-TB/Fr27.5/P3	B3/S-TB/Fr27.5/Ps/SS/P1	Fillet Joint	1580	10.8	10.8	8532	8532	0.000046		Downhand		
		B3/S-TB/Fr27.5/P5	B3/S-TB/Fr27.5/Ps/SS/P1	Fillet Joint	4394	10.8	10.8	23727.6	23727.6	0.000129		Downhand		
		B3/S-TB/Fr27.5/Ps/SS/PI	B3/S-TB/Fr27.5/Ps/SS/FP1	Fillet Joint	812.8	30	30	12192	12192	0.000066		Downhand		
		B3/S-TB/Fr27.5/Sb/SS/PI	B3/S-TB/Fr27.5/Sb/SS/FP1	Fillet Joint	812.8	30	30	12192	12192	0.000066		Downhand		
		6	Bulkhead Plate	Stiffener Bulkhead	B3/S-TB/Fr27.5/Si/IFB1	Fillet Joint	1096.28	30	30	32888.50909	0	0.000090	0.001717278	Downhand
					B3/S-TB/Fr27.5/Si/IFB2	Fillet Joint	823.12	30	30	24893.73638	0	0.000087	0.001128179	Downhand
B3/S-TB/Fr27.5/Si/IFB3	Fillet Joint				570.56	30	30	17116.88182	0	0.000047	0.00085835	Downhand		
Plate Bar	B3/S-TB/Fr27.5/Si/IFB4			Fillet Joint	1096.28	30	30	32888.50909	0	0.000090	0.001717278	Downhand		
	B3/S-TB/Fr27.5/Si/IFB5			Fillet Joint	823.12	30	30	24893.73638	0	0.000087	0.001128179	Downhand		
	B3/S-TB/Fr27.5/Si/IFB6			Fillet Joint	570.56	30	30	17116.88182	0	0.000047	0.00085835	Downhand		
	B3/S-TB/Fr27.5/Si/Bp1			Fillet Joint	999.18	10.8	10.8	10791.12436	0	0.000029	0.00085504	Downhand		
	B3/S-TB/Fr27.5/Si/Bp2			Fillet Joint	1321.33	10.8	10.8	14270.41309	0	0.000039	0.001249012	Downhand		
	B3/S-TB/Fr27.5/Si/Bp3			Fillet Joint	1639.51	10.8	10.8	17706.72764	0	0.000048	0.001638117	Downhand		
	B3/S-TB/Fr27.5/Si/Bp4			Fillet Joint	1831.97	10.8	10.8	19785.24655	0	0.000054	0.001873475	Downhand		
	B3/S-TB/Fr27.5/Si/Bp5			Fillet Joint	2020.74	10.8	10.8	21824.00182	0	0.000059	0.00210433	Downhand		
	B3/S-TB/Fr27.5/Si/Bp6			Fillet Joint	2220.62	10.8	10.8	23982.696	0	0.000065	0.002348767	Downhand		
	B3/S-TB/Fr27.5/Si/Bp7			Fillet Joint	2297.27	10.8	10.8	24810.54545	0	0.000068	0.002442507	Downhand		
	B3/S-TB/Fr27.5/Si/Bp8			Fillet Joint	2297.27	10.8	10.8	24810.54545	0	0.000068	0.002442507	Downhand		
	Stiffener Bulb Plate			B3/S-TB/Fr27.5/Si/Bp9	Fillet Joint	1386.36	10.8	10.8	14972.72727	0	0.000041	0.001328537	Downhand	
				B3/S-TB/Fr27.5/Si/Bp10	Fillet Joint	2297.27	10.8	10.8	24810.54545	0	0.000068	0.002442507	Downhand	
				B3/S-TB/Fr27.5/Si/Bp11	Fillet Joint	2297.27	10.8	10.8	24810.54545	0	0.000068	0.002442507	Downhand	
				B3/S-TB/Fr27.5/Si/Bp12	Fillet Joint	2220.62	10.8	10.8	23982.696	0	0.000065	0.002348767	Downhand	
B3/S-TB/Fr27.5/Si/Bp13				Fillet Joint	2020.74	10.8	10.8	21824.00182	0	0.000059	0.00210433	Downhand		
B3/S-TB/Fr27.5/Si/Bp14				Fillet Joint	1831.97	10.8	10.8	19785.24655	0	0.000054	0.001873475	Downhand		
B3/S-TB/Fr27.5/Si/Bp15	Fillet Joint			1639.51	10.8	10.8	17706.72764	0	0.000048	0.001638117	Downhand			
B3/S-TB/Fr27.5/Si/Bp16	Fillet Joint	1321.33	10.8	10.8	14270.41309	0	0.000039	0.001249012	Downhand					
B3/S-TB/Fr27.5/Si/Bp17	Fillet Joint	999.18	10.8	10.8	10791.12436	0	0.000029	0.00085504	Downhand					
Total 1			93704.6338					0.0039	0.2827					

Sub Blok Bottom

Panel Bottom

Join Sub Panel

No.	Komponen	Weld Item	Komponen	Panel	Sambungan Las	Panjang Pengelasan	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
							Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	Tank Top Plate	B3/SB-B/TT/P1	B3/SB-B/TT/P2	Tank Top Plate	Butt Joint	4875	35.316	10.8	86082.75	26325	0.000306	0.080565	Downhand
			B3/SB-B/TT/Bp1		Fillet Joint	4780	10.8	10.8	25812	25812	0.000141	0.004219	Downhand
			B3/SB-B/TT/Bp2		Fillet Joint	4780	10.8	10.8	25812	25812	0.000141	0.004219	Downhand
			B3/SB-B/TT/Bp3		Fillet Joint	2520	10.8	10.8	13608	13608	0.000074	0.002224	Downhand
			B3/SB-B/TT/Bp4		Fillet Joint	4780	10.8	10.8	25812	25812	0.000141	0.004219	Downhand
			B3/SB-B/TT/Bp5		Fillet Joint	4780	10.8	10.8	25812	25812	0.000141	0.004219	Downhand
2	B3/SB-LC/B/Ci/Tc/WP1	B3/SB-LC/B/Ci/Tc/FP1	B3/SB-LC/B/Ci/Tc/FP2	Tank Centerline Construction	Fillet Joint	6588.24	30	30	98823.6	98823.6	0.000538	0.030239	Downhand
			B3/SB-LC/B/Ci/Tc/FP2		Fillet Joint	6577.642	30	30	98664.63	98664.63	0.000537	0.005731	Downhand
3	B3/SB-LC/B/Ps/Bkh/WP	B3/SB-LC/B/Ps/Bkh/FP1	B3/SB-LC/B/Ps/Bkh/FP2	Bulkhead/Portside	Fillet Joint	4320.092	30	30	64801.38	64801.38	0.000353	0.033848	Downhand
			B3/SB-LC/B/Ps/Bkh/FP2		Fillet Joint	4320.092	30	30	64801.38	64801.38	0.000353	0.004235	Downhand
4	B3/SB-F/TF/Fr23/Ps/B/SAP	B3/SB-F/TF/Fr23/Ps/B/S1	B3/SB-F/TF/Fr23/Ps/B/S2	Transverse Frame 23Bottom/Portside	Fillet Joint	1433.832	30	30	21507.48	21507.48	0.000117	0.013336	Downhand
			B3/SB-F/TF/Fr23/Ps/B/S3		Fillet Joint	632.06	30	30	9480.9	9480.9	0.000052	0.000551	Downhand
			B3/SB-F/TF/Fr23/Ps/B/S3		Fillet Joint	1268.04	30	30	19020.6	19020.6	0.000104	0.001105	Downhand
			B3/SB-F/TF/Fr24/Ci/B/S1		Fillet Joint	570	30	30	8550	8550	0.000047	0.000497	Downhand
			B3/SB-F/TF/Fr24/Ci/B/S1	Fillet Joint	4775.636	30	30	71634.54	71634.54	0.000390	0.062372	Downhand	



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
Total 3			91804,6760					0,0049	0,1661	

Id Item	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
					Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B3/SB-D/TDB/Fr23/Ps/WP	Transverse Deck Beam Frame 23Centerline	Fillet Join	4326,492	10,8	10,8	23363,0568	23363,0568	0,000127	0,007201	Downhand
				4800,54	10,8	10,8	25922,916	25922,916	0,000141	0,002353	Downhand
2	B3/SB-D/TDB/Fr24/Ps/WP	Transverse Deck Beam Frame 24Centerline	Fillet Join	3683,064	10,8	10,8	19888,5456	19888,5456	0,000108	0,006051	Downhand
				4329,116	10,8	10,8	23377,2264	23377,2264	0,000127	0,002122	Downhand
3	B3/SB-D/TDB/Fr25/Ps/WP	Transverse Deck Beam Frame 25Centerline	Fillet Join	3983,606	10,8	10,8	21511,4724	21511,4724	0,000117	0,006683	Downhand
				4457,66	10,8	10,8	24071,364	24071,364	0,000131	0,002185	Downhand
4	B3/SB-D/TDB/Fr26/Ps/WP	Transverse Deck Beam Frame 26Centerline	Fillet Join	3814,166	10,8	10,8	20596,4964	20596,4964	0,000112	0,006250	Downhand
				4500,558	10,8	10,8	24303,0132	24303,0132	0,000132	0,002206	Downhand
5	B3/SB-D/TDB/Fr27/Ps/WP	Transverse Deck Beam Frame 27Centerline	Fillet Join	3700	10,8	10,8	19980	19980	0,000109	0,006207	Downhand
				3700	10,8	10,8	19980	19980	0,000109	0,001814	Downhand
6	B3/SB-D/TDB/Fr27.5/Ps/WP	Transverse Deck Beam Frame 27.5Centerline	Fillet Join	3793,552	10,8	10,8	20485,1808	20485,1808	0,000112	0,006139	Downhand
				4436	10,8	10,8	23954,4	23954,4	0,000130	0,002174	Downhand
7	B3/SB-D/TDB/Fr28/Ps/WP	Transverse Deck Beam Frame 28Portside	Fillet Join	3700	10,8	10,8	19980	19980	0,000109	0,006225	Downhand
				4144	10,8	10,8	22377,6	22377,6	0,000122	0,002031	Downhand
8	B3/SB-D/TDB/Fr29/Ps/WP	Transverse Deck Beam Frame 29Portside	Fillet Join	3577,344	10,8	10,8	19317,6576	19317,6576	0,000105	0,005824	Downhand
				4658	10,8	10,8	25153,2	25153,2	0,000137	0,002283	Downhand
9	B3/SB-D/TDB/Fr27.5/Ps/WP	Transverse Deck Beam Frame 27.5Portside	Fillet Join	4144	10,8	10,8	19980	19980	0,000109	0,006225	Downhand
				3271,832	10,8	10,8	17687,8928	17687,8928	0,000096	0,005367	Downhand
10	B3/SB-D/TDB/Fr27.5/Ps/WP	Transverse Deck Beam Frame 27.5Centerline	Fillet Join	4658	10,8	10,8	25153,2	25153,2	0,000137	0,002283	Downhand
				3700	10,8	10,8	19980	19980	0,000109	0,007085	Downhand
11	B3/SB-D/TDB/Fr27.5/Ps/WP	Transverse Deck Beam Frame 27.5Centerline	Fillet Join	3629	10,8	10,8	19596,6	19596,6	0,000107	0,001779	Downhand
				4428	10,8	10,8	23911,2	23911,2	0,000130	0,005733	Downhand
12	B3/SB-D/TDB/Fr27.5/Ps/WP	Transverse Deck Beam Frame 27.5Portside	Fillet Join	3081,566	10,8	10,8	16640,4564	16640,4564	0,000091	0,001510	Downhand
				268	35,316	10,8	4732,344	1447,2	0,000017	0,028033	Downhand
7	B3/SB-D/LDB/Ps/WP1	B3/SB-D/LDB/Ps/WP2	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,017367	Downhand
	B3/SB-D/LDB/Ps/FB1.1	B3/SB-D/LDB/Ps/FB1.2	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,015492	Downhand
	B3/SB-D/LDB/Ps/FB1.3	B3/SB-D/LDB/Ps/FB1.4	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,015445	Downhand
	B3/SB-D/LDB/Ps/FB1.5	B3/SB-D/LDB/Ps/FB1.6	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,015338	Downhand
	B3/SB-D/LDB/Ps/FB1.7	B3/SB-D/LDB/Ps/FB2.1	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,014666	Downhand
	B3/SB-D/LDB/Ps/FB2.2	B3/SB-D/LDB/Ps/FB2.3	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,017367	Downhand
	B3/SB-D/LDB/Ps/FB2.4	B3/SB-D/LDB/Ps/FB2.5	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,015492	Downhand
	B3/SB-D/LDB/Ps/FB2.6	B3/SB-D/LDB/Ps/FB2.7	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,015445	Downhand
	B3/SB-D/LDB/Ps/FB2.8	B3/SB-D/LDB/Ps/FB2.9	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,015338	Downhand
	B3/SB-D/LDB/Ps/FB2.10	B3/SB-D/LDB/Ps/FB2.11	Butt Joint	240	76,764	30,228	9211,68	3627,36	0,000035	0,014666	Downhand
	B3/SB-D/LDB/Ps/WP1B3/SB-D/L	B3/SB-D/LDB/Ps/FB1.1B3/SB-D/L	Fillet Join	19206,722	30	30	288100,83	288100,83	0,001569	0,001569	Downhand
	B3/SB-D/LDB/Ps/WP1B3/SB-D/L	B3/SB-D/LDB/Ps/FB2.1B3/SB-D/L	Fillet Join	19206,722	30	30	288100,83	288100,83	0,001569	0,001569	Downhand

Join Panel											
1	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP1	Long Deck BeamPortside	Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP1		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP1		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP1		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP2		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP2		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP2		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP2		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP2		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
	Transverse Deck Beam Frame 24	B3/SB-D/LDB/Ps/WP2		Fillet Join	729,714	30	30	10945,71	10945,71	0,0000596	Downhand
Total 4				242164,8620					0,0126	0,5871	

Sub Blok Keel Plate												
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B2/SB-LC/B/Ci/K3	B3/SB-LC/B/Ci/K4	Keel Plate	Butt Joint	300	76,764	30,228	11514,6	4534,2	0,000044	0,036171	Vertical
2	B3/SB-LC/B/Ci/K4	B3/SB-LC/B/Ci/K5			300	76,764	30,228	11514,6	4534,2	0,000044	0,018252	Vertical
Total 5					600	153,528	60,456		0,0000874	0,054422924		

Sub Blok Plat Bottom											
Portside and Starboard											
Luas Penampang Kampuh Las											
Volume Pengelasan											



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
B3/SB-SS/B/Ps/2	Plat Bottom	Butt Joint	11434,64	35,316	10,8	201912,8731	61747,056	0,000718	0,4418	Downhand
Total 6			22869,28					0,001435892	0,883523042	
Portside and Starboard										
Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1 B3/SB-SS/S/Ps/1	B3/SB-SS/S/Ps/2	Plat Bottom	10211,5	21,084	9	107649,633	45951,75	0,000418	0,1891	Downhand
Total 7			20423					0,000836513	0,378279074	

Assembly Block

No.	Weld Item			Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi dan Penambahan Berat Bracket atau Pilar(Ton)	Posisi
	Panel	Komponen	Panel			Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	Sub Blok Keel Plate	B3/SB-LC/B/Ci/WP1 B3/SB-LC/B/Ci/WP1	Sub Blok Bottom	Fillet Joint Fillet Joint	4590,028 8271,892	10,8 10,8	10,8 10,8	24786,1512 44668,2168	24786,1512 44668,2168	0,000135 0,000243		Horizontal Horizontal
2	Sub Blok Keel Plate	B3/SB-F/TF/Fr23/Ps/B/SA/P B3/SB-F/TF/Fr24/Ci/B/P B3/SB-F/TF/Fr25/Ps/B/WP B3/SB-F/TF/Fr26/Ps/B/WP B3/SB-F/TF/Fr27/Ps/B/WP B3/SB-TB/Fr27,5/Ps/B/WP	Sub Blok Bottom	Fillet Joint Fillet Joint Fillet Joint Fillet Joint Fillet Joint Fillet Joint	170,736 273,716 170,678 170,526 170,38 188,57	10,8 10,8 10,8 10,8 10,8 10,8	10,8 10,8 10,8 10,8 10,8 10,8	921,9744 1478,0664 921,6612 920,8404 920,052 1018,278	921,9744 1478,0664 921,6612 920,8404 920,052 1018,278	0,000005 0,000008 0,000005 0,000005 0,000005 0,000006		Vertical Vertical Vertical Vertical Vertical Vertical
3	Sub Blok Bottom	B3/SB-LC/B/Ps/Bkh/WP B3/SB-F/TF/Fr24/Ci/B/P B3/SB-F/TF/Fr25/Ps/B/WP B3/SB-F/TF/Fr26/Ps/B/WP B3/SB-F/TF/Fr27/Ps/B/WP	Sub Side Shell	Fillet Joint Butt Joint Butt Joint Butt Joint	1723,73 560 940,192 767,938 910,236	10,8 17,04 20,916 20,916 20,916	10,8 7,2 7,2 7,2	9308,142 4771,2 9832,827936 8031,095604 9519,248088	9308,142 2016 3384,6912 2764,5768	0,000051 0,000018 0,000036 0,000029 0,000035		Vertical Vertical Vertical Vertical Vertical
4	Sub Side Shell	B3/SB-F/TF/Fr23/Ps/SS/WP B3/SB-F/TF/Fr24/Ps/SS/WP B3/SB-F/TF/Fr25/Ps/SS/WP B3/SB-F/TF/Fr26/Ps/SS/WP B3/SB-F/TF/Fr27/Ps/SS/WP B3/S-TB/Fr27,5/Ps/SS/WP	Sub Main Deck	Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint	300 300 300 300 300 300	17,04 17,04 20,916 20,916 20,916 20,916	7,2 7,2 7,2 7,2 7,2 7,2	2556 2556 3137,4 3137,4 3137,4 3137,4	1080 1080 1080 1080 1080 1080	0,000010 0,000010 0,000011 0,000011 0,000011 0,000011		Overhead Overhead Overhead Overhead Overhead Overhead
5	Sub Side Shell	B3/SB-F/TF/Fr23/Ps/SS/WP B3/SB-F/TF/Fr24/Ps/SS/WP B3/SB-F/TF/Fr25/Ps/SS/WP B3/SB-F/TF/Fr26/Ps/SS/WP B3/SB-F/TF/Fr27/Ps/SS/WP B3/S-TB/Fr27,5/Ps/SS/WP B3/SB-D/MP/Ps/1	Main Deck Plat	Fillet Joint Fillet Joint Fillet Joint Fillet Joint Fillet Joint Fillet Joint Butt Joint	1159,42 1132,25 1084,814 1010,478 893,668 866,758 826,438	10,8 10,8 30 30 30 30 30	10,8 10,8 30 30 30 30 9	6260,868 6114,15 16272,21 15157,17 13405,02 13001,37 8712,309396	6260,868 6114,15 16272,21 15157,17 13405,02 13001,37 3718,971	0,000034 0,000033 0,000099 0,000083 0,000073 0,000071 0,000034		Overhead Overhead Overhead Overhead Overhead Overhead Overhead
6	Bulkhead Frame 27.5	B3/SB-LC/B/Ci/WP1 B3/SB-LC/B/Ci/WP1	Sub Blok Bottom	Fillet Joint Fillet Joint	2842,276 2661,37	10,8 10,8	10,8 10,8	15348,2904 14371,398	15348,2904 14371,398	0,000084 0,000078		Vertical Vertical
7	Sub Blok Transverse Bulkhead Fr22	B3/SB-LC/B/Ps/Bkh/WP B3/Fr24/TT/Bracket/1 B3/Fr24/TT/Bracket/2 B3/Fr24/TT/Bracket/3 B3/Fr24/Lbkh/Bracket/1 B3/Fr24/Lbkh/Bracket/2	Sub Blok Bottom	Fillet Joint Fillet Joint Fillet Joint Fillet Joint Fillet Joint Fillet Joint	1933,038 560,146 560,146 560,146 600 600	10,8 10,8 10,8 10,8 10,8 10,8	10,8 10,8 10,8 10,8 10,8 10,8	10438,4052 3024,7884 3024,7884 3024,7884 3240 3240	10438,4052 3024,7884 3024,7884 3024,7884 3240 3240	0,000057 0,000016 0,000016 0,000016 0,000018 0,000018		Vertical Vertical Vertical Vertical Vertical Vertical
8	Deck Planking T	B3/SB-D/MP/Dpt/1 B3/SB-D/MP/Dpt/2 B3/SB-D/MP/Dpt/3 B3/SB-D/MP/Dpt/5 B3/SB-D/MP/Dpt/6 B3/SB-D/MP/Dpt/1 B3/SB-D/MP/Dpt/2 B3/SB-D/MP/Dpt/3 B3/SB-D/MP/Dpt/4	Main Deck Plat	Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint Butt Joint	17608,432 6571,5 6571,5 6571,5 2980 2980 2160 2160 2160 540	2,4 2,4 2,4 2,4 2,4 2,4 2,4 2,4 2,4 2,4	0 0 0 0 0 0 0 0 0 0	42260,2368 15771,6 15771,6 15771,6 7152 7152 5184 5184 5184 1296	0 0 0 0 0 0 0 0 0 0	0,000115 0,000043 0,000043 0,000043 0,000019 0,000014 0,000014 0,000014 0,000014 0,000004	0,3355	Downhand Downhand Downhand Downhand Downhand Downhand Downhand Downhand Downhand Downhand
9	Deck Planking T	B3/SB-D/TDB/Fr23/Ps/WP B3/SB-D/TDB/Fr24/Ps/WP B3/SB-D/TDB/Fr25/Ps/WP	Sub Main Deck	Fillet Joint Fillet Joint Fillet Joint	12391,1111 12391,1111 12391,1111	10,8 10,8 10,8	10,8 10,8 10,8	66912 66912 66912	66912 66912 66912	0,000364 0,000364 0,000364		Overhead Overhead Overhead



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kambung Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
				Kampung I (mm ²)	Kampung II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
11	Long Frame Side Shell Portside	Sub Side Shell	B3/SB-D/TDB/Fr26/Ps/WP	Fillet Join	12391,11111	10,8	10,8	66912	66912	0,000364	Overhead	
			B3/SB-D/TDB/Fr27/Ps/WP	Fillet Join	12391,11111	10,8	10,8	66912	66912	0,000364	Overhead	
			B3/SB-D/TDB/Fr27,5/Ps/WP	Fillet Join	12389,33333	10,8	10,8	66902,4	66902,4	0,000364	Overhead	
			B3/SB-F/TF/Fr23/Ps/B/S/PA	Fillet Join	2090,066	10,8	10,8	11286,3564	11286,3564	0,000061	Overhead	
			B3/SB-F/TF/Fr24/CI/B/P	Fillet Join	1140,036	10,8	10,8	6156,1944	6156,1944	0,000034	Overhead	
			B3/SB-F/TF/Fr25/Ps/B/WP	Fillet Join	2090,066	10,8	10,8	11286,3564	11286,3564	0,000061	Overhead	
			B3/SB-F/TF/Fr26/Ps/B/WP	Fillet Join	2090,066	10,8	10,8	11286,3564	11286,3564	0,000061	Overhead	
			B3/SB-F/TF/Fr27/Ps/B/WP	Fillet Join	1900,066	10,8	10,8	10260,324	10260,324	0,000056	Overhead	
			B3/SB-F/TF/Fr23/Ps/B/S/PA	Fillet Join	1440	10,8	10,8	7776	7776	0,000042	Overhead	
			B3/SB-F/TF/Fr24/CI/B/P	Fillet Join	1440	10,8	10,8	7776	7776	0,000042	Overhead	
12	Long Frame Bottom Portside	Sub Blok Transverse Bulkhead Fr22	B3/SB-F/TF/Fr25/Ps/B/WP	Fillet Join	1280	10,8	10,8	6912	6912	0,000038	Overhead	
			B3/SB-F/TF/Fr26/Ps/B/WP	Fillet Join	1440	10,8	10,8	7776	7776	0,000042	Overhead	
			B3/SB-F/TF/Fr27/Ps/B/WP	Fillet Join	1440	10,8	10,8	7776	7776	0,000042	Overhead	
			B3/Fr22/LF/Bracket1	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket2	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket3	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket4	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket5	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket6	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket7	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket8	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket9	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket10	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket11	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket12	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket13	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket14	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket15	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket16	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
			B3/Fr22/LF/Bracket17	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead	
B3/Fr22/LF/Bracket18	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead				
B3/Fr22/LF/Bracket19	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead				
B3/Fr22/LF/Bracket20	Fillet Join	600	10,8	10,8	3240	3240	0,000018	Overhead				
13	Long Frame Bottom Portside	Bulkhead Frame 27.5	B3/Fr27,5/LF/Bracket/1	Fillet Join	788,388	10,8	10,8	4257,2952	4257,2952	0,000203	0,000299854	Overhead
			B3/Fr27,5/LF/Bracket/2	Fillet Join	641,454	10,8	10,8	3463,8516	3463,8516	0,000019	0,000249028	Overhead
			B3/Fr27,5/LF/Bracket/3	Fillet Join	665,896	10,8	10,8	3595,8384	3595,8384	0,000020	0,000259147	Overhead
			B3/Fr27,5/LF/Bracket/4	Fillet Join	681,32	10,8	10,8	3679,128	3679,128	0,000020	0,000265233	Overhead
			B3/Fr27,5/LF/Bracket/5	Fillet Join	1086,108	10,8	10,8	5864,9832	5864,9832	0,000032	0,000435958	Overhead
			B3/Fr27,5/LF/Bracket/6	Fillet Join	793,268	10,8	10,8	4283,6472	4283,6472	0,000023	0,000301901	Overhead
			B3/Fr27,5/LF/Bracket/7	Fillet Join	678,212	10,8	10,8	3662,3448	3662,3448	0,000020	0,000264062	Overhead
			B3/Fr27,5/LF/Bracket/8	Fillet Join	675,378	10,8	10,8	3647,0412	3647,0412	0,000020	0,000262878	Overhead
			B3/Fr27,5/LF/Bracket/9	Fillet Join	681,958	10,8	10,8	3682,5732	3682,5732	0,000020	0,000265545	Overhead
			B3/Fr27,5/LF/Bracket/10	Fillet Join	678,118	10,8	10,8	3661,8372	3661,8372	0,000020	0,000264016	Overhead
			B3/Fr27,5/LF/Bracket/11	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
			B3/Fr27,5/LF/Bracket/12	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
			B3/Fr27,5/LF/Bracket/13	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
			B3/Fr27,5/LF/Bracket/14	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
			B3/Fr27,5/LF/Bracket/15	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
			B3/Fr27,5/LF/Bracket/16	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
			B3/Fr27,5/LF/Bracket/17	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead
14	Sub Blok Plat Bottom	Long Frame Bottom Portside	B3/SB-F/LF/B/Ps/1	Fillet Join	2481,82	30	30	74454,54545	0	0,000203	0,006234581	Downhand
			B3/SB-F/LF/B/Ps/2	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/3	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/4	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/5	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/6	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/7	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/8	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/9	Fillet Join	6300,91	30	30	189027,2727	0	0,000515	0,017147695	Downhand
			B3/SB-F/LF/B/Ps/10	Fillet Join	5786,63	30	30	173598,8182	0	0,000473	0,015678126	Downhand
			B3/SB-F/LF/B/Ps/11	Fillet Join	2491,28	30	30	74738,45455	0	0,000204	0,006261623	Downhand
15	Sub Blok Plat Side Shell	Long Frame Side Shell Portside	B3/SB-F/LF/Ss1/Ps/1	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/2	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/3	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/4	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/5	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/6	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/7	Fillet Join	4660,00	10,8	10,8	50328	0	0,000137	0,011756674	Horizontal
			B3/SB-F/LF/Ss1/Ps/8	Fillet Join	2820,00	10,8	10,8	28296	0	0,000077	0,006354959	Horizontal



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi	
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)				
	B3/SB-FLF/Ss1/Ps/9	Fillet Joint	4622,00	10,8		49917,6	0	0,000136	0,011656054	Horizontal	
	B3/SB-LC/B/Ps/Bkh/WP	Longitudinal Bulkhead/Ports	4786,19	30	30	71792,85	71792,85	0,000391	0,02961356	Downhand	
	Transverse Frame 23PortsideSid	Fillet Joint	5141,716	30	30	77125,74	77125,74	0,000420		Downhand	
	Transverse Frame 24PortsideSid	Fillet Joint	6108,754	30	30	91631,31	91631,31	0,000499		Downhand	
	Transverse Frame 25PortsideSid	Fillet Joint	4895,868	30	30	73438,02	73438,02	0,000400		Downhand	
	Transverse Frame 26PortsideBot	Fillet Joint	4722,406	30	30	70836,09	70836,09	0,000386		Downhand	
	Transverse Frame 27PortsideBot	Fillet Joint	4597,198	30	30	68957,97	68957,97	0,000376		Downhand	
	Bulkhead Frame 27.5	Fillet Joint	6218,126	30	30	93271,89	93271,89	0,000508		Downhand	
	Transverse Frame 23PortsideSid	Fillet Joint	3823,19	30	30	57347,85	57347,85	0,000312		Downhand	
	Transverse Frame 24PortsideSid	Fillet Joint	3823,19	30	30	57347,85	57347,85	0,000312		Downhand	
	Transverse Frame 25PortsideSid	Fillet Joint	3882,864	30	30	58242,96	58242,96	0,000317		Downhand	
	Transverse Frame 26PortsideSid	Fillet Joint	3914,45	30	30	58716,75	58716,75	0,000320		Downhand	
	Transverse Frame 27PortsideBot	Fillet Joint	3889,584	30	30	58343,76	58343,76	0,000318		Downhand	
	Bulkhead Frame 27.5	Fillet Joint	4536,26	30	30	68043,9	68043,9	0,000371		Downhand	
19	Sub Blok Keel Plate	B3/SB-SS/B/Ps/1	Sub Blok Plat Bottom	Fillet Joint	11400,02	30	171000,3	171000,3	0,000931		Horizontal
20	Sub Blok Plat Bottom		Sub Blok Plat Side Shell	Butt Joint	9586,59	16,957	12,79	81279,90332	61306,24305	0,000388	Horizontal
21	Plat Bottom Blok 2	B3/SB-SS/B/Ps/1	Sub Blok Plat Bottom	Butt Joint	3828,486	35,316	10,8	67603,40579	20673,8244	0,000240	Overhead
		B3/SB-SS/B/Ps/2		Butt Joint	3723,858	35,316	10,8	65755,88456	20108,8332	0,000234	Overhead
22	Plat Side Shell Blok 3	B3/SB-SS/S/Ps/1	Sub Blok Plat Side Shell	Butt Joint	3388,826	21,084	9	35725,00369	15249,717	0,000139	Vertical
		B3/SB-SS/S/Ps/2		Butt Joint	1424,104	21,084	9	15012,90437	6408,468	0,000058	Vertical
Total 8					669171,9749				0,0333	1,2770	



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
B4/S-TB/Fr30/P/2	Bulkhead Plate	Butt Join	7121.438	20,916	7.2	74475.9986	25637.1768	0.000273	0,326562	Downhand
B4/S-TB/Fr30/P/3			1126.402	17,04	7.2	19193.89008	8110.0944	0.000074		Downhand
B4/S-TB/Fr30/P/4			3067.08	59,148	10,8	181411.6478	33124.464	0.000584		Downhand
B4/S-TB/Fr30/P/5			3200	17,04	7.2	54528	23040	0.000211		Downhand
B4/S-TB/Fr30/P/6			3200	17,04	7.2	54528	23040	0.000211		Downhand
B4/S-TB/Fr30/P/6			1126.402	17,04	7.2	19193.89008	8110.0944	0.000074		Downhand
B4/S-TB/Fr30/P/7			3067.08	59,148	10,8	181411.6478	33124.464	0.000584		Downhand
B4/S-TB/Fr30/P/5	8896.698	17,04	7.2	151599.7339	64056.2256	0.000587	Downhand			
B4/S-TB/Fr30/S/IFB1	Stiffener Bulkhead	Fillet Join	5025.02	30		150750.7091	0	0.000410	0,010190062	Downhand
B4/S-TB/Fr30/S/IFB2			4454.12	30		133623.6	0	0.000364		Downhand
B4/S-TB/Fr30/S/IFB1			2593.09	10,8		28005.35236	0	0.000076		Downhand
B4/S-TB/Fr30/S/IFP1			2579.35	30		77380.44545	0	0.000211		Downhand
B4/S-TB/Fr30/S/IFB2			2593.09	10,8		28005.35236	0	0.000076		Downhand
B4/S-TB/Fr30/S/IFP2			2579.35	30		77380.44545	0	0.000211		Downhand
B4/S-TB/Fr30/S/IFB1			1177.78	10,8		12720.04364	0	0.000035		Downhand
B4/S-TB/Fr30/S/IFB2			1445.24	10,8		15608.55273	0	0.000043		Downhand
B4/S-TB/Fr30/S/IFB3			1714.38	10,8		18515.32364	0	0.000050		Downhand
B4/S-TB/Fr30/S/IFB4			1981.75	10,8		21402.85091	0	0.000058		Downhand
B4/S-TB/Fr30/S/IFB5			2249.55	10,8		24295.09091	0	0.000066		Downhand
B4/S-TB/Fr30/S/IFB6			2516.98	10,8		27183.33491	0	0.000074		Downhand
B4/S-TB/Fr30/S/IFB7			2516.98	10,8		27183.33491	0	0.000074		Downhand
B4/S-TB/Fr30/S/IFB8			2249.55	10,8		24295.09091	0	0.000066		Downhand
B4/S-TB/Fr30/S/IFB9			1981.75	10,8		21402.85091	0	0.000058		Downhand
B4/S-TB/Fr30/S/IFB10			1714.38	10,8		18515.32364	0	0.000050		Downhand
B4/S-TB/Fr30/S/IFB11			1445.24	10,8		15608.55273	0	0.000043		Downhand
B4/S-TB/Fr30/S/IFB12			1177.78	10,8		12720.04364	0	0.000035		Downhand
B4/S-TB/Fr30/S/IFB1			2966.29	30		88988.75455	0	0.000242		Downhand
B4/S-TB/Fr30/S/IFB2			3229.58	30		96887.53636	0	0.000264		Downhand
B4/S-TB/Fr30/S/IFB3			2811.09	30		84332.72727	0	0.000230		Downhand
B4/S-TB/Fr30/S/IFB4	2935.80	30		88074	0	0.000240	Downhand			
B4/S-TB/Fr30/S/IFB5	2811.09	30		84332.72727	0	0.000230	Downhand			
B4/S-TB/Fr30/S/IFB6	3229.58	30		96887.53636	0	0.000264	Downhand			
B4/S-TB/Fr30/S/IFB7	2966.29	30		88988.75455	0	0.000242	Downhand			
Total 1			93750.1836					0,0063	0,4690	

Sub Blok Bottom

Panel Panel Bottom

Join Sub Panel

No.	Komponen	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B4/SB-F/TF/Fr28/Ps/B/WP	B4/SB-F/TF/Fr28/Ps/B/FP1	Transverse Frame 28Bottom	Fillet Join	3668.596	30	30	55028.94	55028.94	0.000300	0.028002	Downhand
				Fillet Join	3262.884	30	30	48943.26	48943.26	0.000267	0.002843	Downhand
2	B4/SB-F/TF/Fr29/Ps/B/WP	B4/SB-F/TF/Fr29/Ps/B/FP1	Transverse Frame 29Bottom	Fillet Join	4585.662	76,8	76,8	176089.4208	176089.4208	0.000959	0.023964	Downhand
				Fillet Join	2656.776	76,8	76,8	102020.1984	102020.1984	0.000556	0.004341	Downhand
Total 2					14173.9180					0,0021	0,0591	

Sub Blok Side Shell

Panel Panel Side Shell

Join Sub Panel

No.	Komponen	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B4/SB-F/TF/Fr28/Ps/SS/WP	B4/SB-F/TF/Fr28/Ps/SS/FP1	Transverse Frame 28Side	Fillet Join	7408.508	76,8	76,8	284486.7072	284486.7072	0.001549	0.036076	Downhand
2	B4/SB-F/TF/Fr29/Ps/SS/WP	B4/SB-F/TF/Fr29/Ps/SS/FP1	Transverse Frame 29Side	Fillet Join	7128.01	76,8	76,8	273715.584	273715.584	0.001491	0.035429	Downhand
Total 3					29073.0360	307,2000	307,2000			0,0061	0,1430	

Sub Blok Deck

Panel Panel Deck

Join Sub Panel

No.	Komponen	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B4/SB-D/TDB/Fr28/Ci/WP	B4/SB-D/TDB/Fr28/Ci/FP1	Transverse Deck Beam	Fillet Join	3700	30	30	55500	55500	0.000302	0.006225	Downhand
				Fillet Join	4144	30	30	62160	62160	0.000339	0.002031	Downhand
		B4/SB-D/TDB/Fr28/Ps/WP	Transverse Deck Beam	Fillet Join	4658	30	30	69870	69870	0.000381	0.005631	Downhand
				Fillet Join	2859.58	30	30	42893.7	42893.7	0.000234	0.001402	Downhand
		B4/SB-D/TDB/Fr29/Ci/WP	Transverse Deck Beam	Fillet Join	3700	30	30	55500	55500	0.000302	0.006736	Downhand
				Fillet Join	1093.08	30	30	16396.2	16396.2	0.000089	0.000536	Downhand



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi		
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)					
	B4/SB-D/TDB/Fr29/Ci/FP3	Fillet Join	1093.08	30	30	16396.2	16396.2	0.000089	0.000536	Downhand		
	B4/SB-D/TDB/Fr29/Ps/FP1	Fillet Join	2331.76	30	30	34976.4	34976.4	0.000190	0.003959	Downhand		
	B4/SB-D/TDB/Fr29/Ps/FP2	Fillet Join	4383.46	30	30	65751.9	65751.9	0.000358	0.002149	Downhand		
	B4/SB-D/LDB/FB1	Fillet Join	2390	30	30	35850	35850	0.000195	0.004214	Downhand		
	B4/SB-D/LDB/FB2	Fillet Join	2390	30	30	35850	35850	0.000195	0.004214	Downhand		
	B4/SB-D/LDB/WP1	Fillet Join	2390	10.8	10.8	12906	12906	0.000070	0.014584	Downhand		
	B4/SB-D/LDB/WP2	Fillet Join	2390	10.8	10.8	12906	12906	0.000070	0.014584	Downhand		
	B4/SB-D/LDB/Bp1	Fillet Join	2090	10.8	10.8	11286	11286	0.000061	0.001845	Downhand		
	B4/SB-D/LDB/Bp2	Fillet Join	2090	10.8	10.8	11286	11286	0.000061	0.001845	Downhand		
	B4/SB-D/LDB/Bp3	Fillet Join	2090	10.8	10.8	11286	11286	0.000061	0.001845	Downhand		
	B4/SB-D/LDB/Bp4	Fillet Join	1791.544	10.8	10.8	9674.3376	9674.3376	0.000053	0.001581	Downhand		
Join Panel												
1	Long Deck BeamPortside	B4/SB-D/TDB/Fr28/Ci/WP	Transverse Deck Beam F	Fillet Join	729.714	10.8	10.8	3940.4556	3940.4556	0.0000215	Downhand	
		B4/SB-D/TDB/Fr28/Ps/WP	Transverse Deck Beam F	Fillet Join	729.714	10.8	10.8	3940.4556	3940.4556	0.0000215	Downhand	
		B4/SB-D/TDB/Fr29/Ci/WP	Transverse Deck Beam F	Fillet Join	729.714	10.8	10.8	3940.4556	3940.4556	0.0000215	Downhand	
		B4/SB-D/TDB/Fr29/Ps/WP	Transverse Deck Beam F	Fillet Join	729.714	10.8	10.8	3940.4556	3940.4556	0.0000215	Downhand	
Total 4				64195.5880					0.0043	0.0725		
Sub Blok Keel Plate												
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B3/SB-LC/B/Ci/K5	B4/SB-LC/B/Ci/K6	Keel Plate	Butt Join	500.856	76.764	30.228	19223.85499	7569.937584	0.000073	0.020361	Vertical
Total 5				500.856						0.0000730	0.020361364	
Sub Blok Plat Bottom												
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B4/SB-SS/B/Ps/1	B4/SB-SS/B/Sb/2	Sub Plat Bottom	Butt Join	2818.876	35.316	10.8	49775.71241	15221.9304	0.000177	0.2529	Downhand
2	B4/SB-SS/B/Sb/3	B4/SB-SS/B/Sb/4		Butt Join	3150.98	35.316	10.8	55640.00484	17015.292	0.000198		Downhand
3	B4/SB-SS/B/Ps/1	B4/SB-SS/B/Sb/3		Butt Join	4839.164	35.316	10.8	85449.95791	26131.4856	0.000304		Downhand
4	B4/SB-SS/B/Sb/2	B4/SB-SS/B/Sb/4		Butt Join	2733.786	35.316	10.8	48273.19319	14762.4444	0.000172		Downhand
Total 6				27085.612						0.001700623	0.505717484	
Sub Blok Plat Side Shell												
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat (Ton)	Berat Konstruksi (Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	B4/SB-SS/S/Ps/1	B4/SB-SS/S/Ps/2	Sub Plat Side Shell	Butt Join	9472.598	21.084	9	99860.12812	42626.691	0.000388	0.1906	Downhand
2	B4/SB-SS/S/Sb/2	B4/SB-SS/S/Sb/3		Butt Join	6642.444	21.084	9	70024.64465	29890.998	0.000272		Downhand
3	B4/SB-SS/S/Sb/2	B4/SB-SS/S/Sb/4		Butt Join	2752.698	21.084	9	29018.94232	12387.141	0.000113		Downhand
4	B4/SB-SS/S/Sb/3	B4/SB-SS/S/Sb/4		Butt Join	526.228	21.084	9	5547.495576	2368.026	0.000022		Downhand
Total 7				38787.936						0.001588729	0.381184974	
Assembly Blok												
No.	Panel	Komponen	Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi dan Penambahan Berat Bracket atau Pilar(Ton)	Posisi
						Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
1	Sub Blok Keel Plate	B4/SB-F/TF/Fr28/Ps/B/WP	Sub Blok Bottom	Fillet Join	267.434	10.8	10.8	1444.1436	1444.1436	0.000008	0.000923729	Vertical
		B3/Fr/B/K/Bracket/1		Fillet Join	1524.87	10.8	12.79	8234.298	9751.54365	0.000049		Vertical
		B4/SB-F/TF/Fr29/Ps/B/WP		Fillet Join	488.554	10.8	10.8	2638.1916	2638.1916	0.000014		Vertical
		B3/Fr/B/K/Bracket/2		Fillet Join	1524.87	10.8	12.79	8234.298	9751.54365	0.000049		Vertical
2	Sub Blok Keel Plate	B4/S-TB/Fr30/P1	Transverse Bulkhead Fr30	Fillet Join	602	30	30	9030	9030	0.000049	0.0000237	Vertical
		B4/S-TB/Fr30/B/1		Fillet Join	344.286	30	30	5164.29	5164.29	0.000028		Vertical
		B4/S-TB/Fr30/B/2		Fillet Join	344.286	30	30	5164.29	5164.29	0.000028		Vertical
		Portside and Starboard										
3	Sub Blok Side Shell	B4/SB-F/TF/Fr28/Ps/B/WP	B4/SB-F/TF/Fr28/Ps/SS/WP	Butt Join	965.616	21.084	9	10179.52387	4345.272	0.000040	0.000015	Vertical
		B4/SB-F/TF/Fr28/Ps/B/FP2	B4/SB-F/TF/Fr28/Ps/SS/FP	Butt Join	160	59.148	10.8	4731.84	864	0.000015		Vertical
		B4/SB-F/TF/Fr29/Ps/B/WP	B4/SB-F/TF/Fr29/Ps/SS/WP	Butt Join	991.798	21.084	9	10455.53452	4463.091	0.000041		Vertical
		B4/SB-F/TF/Fr29/Ps/B/FP2	B4/SB-F/TF/Fr29/Ps/SS/FP	Butt Join	160	57.34152	17.028	4587.3216	1362.24	0.000016		Vertical
		Portside and Starboard										
4	Sub Blok Deck	B4/SB-F/TF/Fr28/Ps/SS/WP	B4/SB-D/TDB/Fr28/Ps/WP	Butt Join	300	20.916	7.2	3137.4	1080	0.000011	0.000011	Overhead
		B4/SB-F/TF/Fr29/Ps/SS/WP	B4/SB-D/TDB/Fr29/Ps/WP	Butt Join	300	20.916	7.2	3137.4	1080	0.000011		Overhead
5	Long Deck Beam Center	B4/SB-D/TDB/Fr29/Ci/WP	Transverse Deck Beam F	Fillet Join	1122	10.8	10.8	6058.8	6058.8	0.000033	0.000033	Overhead
		B4/S-TB/Fr30/P/5	Transverse Bulkhead Fr30	Fillet Join	2917.292	10.8	10.8	15753.3768	15753.3768	0.000086		Overhead
		B3/SB-D/M/P/Dpt/6	Deck Planking T	Butt Join	6585.292	2.4	0	7902.3504	0	0.000022		Downhand



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kumpuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi				
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)							
9	Sub Blok Deck	Fillet Join	12391,11111	10,8	10,8	66912	66912	0,000364		Overhead				
		Fillet Join	12391,11111	10,8	10,8	66912	66912	0,000364		Overhead				
		Fillet Join	12391,11111	10,8	10,8	66912	66912	0,000364		Overhead				
	Sub Blok Bottom	Fillet Join	1729,494	30	30	25942,41	25942,41	0,000141		Overhead				
		Fillet Join	1729,494	30	30	25942,41	25942,41	0,000141		Overhead				
		Fillet Join	1262,496	30	30	18937,44	18937,44	0,000103		Overhead				
	Long Frame Bottom Portside	Bulkhead Frame 27.5	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Overhead			
10	Long Frame Bottom Portside	Transverse Bulkhead Fr30	Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			Fillet Join	600	10,8	10,8	3240	3240	0,000018	0,000177849	Horizontal			
			11	Sub Blok Plat Bottom	Long Frame Bottom Portside	Fillet Join	3025,39	30		90761,67273	0	0,000247	0,007787843	Overhead
						Fillet Join	3034,00	30		91020	0	0,000248	0,007812449	Overhead
Fillet Join	3038,41	30					91152,3	0	0,000248	0,007825051	Overhead			
Fillet Join	3043,47	30					91304,18182	0	0,000249	0,007839518	Overhead			
Fillet Join	3048,45	30					91453,36364	0	0,000249	0,007853727	Overhead			
Fillet Join	3054,04	30					91621,2	0	0,000249	0,007869714	Overhead			
Fillet Join	3059,40	30					91781,97273	0	0,000250	0,007885028	Overhead			
Fillet Join	3064,32	30					91929,57273	0	0,000250	0,007899087	Overhead			
Fillet Join	3067,99	30					92039,7	0	0,000251	0,007909576	Overhead			
Fillet Join	2259,90	10,8					24406,9632	0	0,000066	0,005401461	Horizontal			
12	Sub Blok Plat Side Shell	Long Frame Side Shell Portside	Fillet Join	2256,67	10,8		24372,0288	0	0,000066	0,005392896	Horizontal			
			Fillet Join	2253,64	10,8		24339,3552	0	0,000066	0,005384885	Horizontal			
			Fillet Join	2250,76	10,8		24308,244	0	0,000066	0,005377258	Horizontal			
			Fillet Join	2248,07	10,8		24279,1488	0	0,000066	0,005370124	Horizontal			
			Fillet Join	2245,82	10,8		24254,8992	0	0,000066	0,005364179	Horizontal			
			Fillet Join	2244,41	10,8		24239,5776	0	0,000066	0,005360422	Horizontal			
			Fillet Join	2112,59	10,8		22815,9432	0	0,000062	0,005011381	Horizontal			
			Fillet Join	3685,26	30		110557,8	0	0,000301		Downhand			
13	Sub Blok Plat Bottom	Sub Blok Bottom	Fillet Join	3336,394	30		100091,82	0	0,000273		Downhand			
			Fillet Join	5483,772	30		164513,16	0	0,000448		Downhand			
14	Sub Blok Plat Side Shell	Sub Blok Bottom	Fillet Join	3876,954	30		116308,62	0	0,000317		Downhand			
			Fillet Join	4023,832	30		120714,96	0	0,000329		Downhand			
15	Sub Blok Keel Plate	Sub Blok Plat Bottom	Fillet Join	6571,086	30		197132,58	0	0,000537		Downhand			
			Fillet Join	7512,02	30		225360,60	0	0,000614		Horizontal			
16	Sub Blok Plat Side Shell	Sub Blok Plat Side Shell	Butt Join	9562,574	16,957	12,79	162152,5673	122305,3215	0,000775		Horizontal			
17	Plat Bottom Blok 3	Sub Blok Plat Bottom	Butt Join	3874,476	35,316		136830,9944	41844,3408	0,000487		Overhead			
			Butt Join	2726,316	35,316		96282,57586	29444,2128	0,000342		Overhead			



Komponen	Sub Panel	Sambungan Las	Panjang Pengelasan (mm)	Luas Penampang Kampuh Las		Volume Pengelasan		Berat Las (Ton)	Berat Konstruksi (Ton)	Posisi
				Kampuh I (mm ²)	Kampuh II (Back Gouging/Double Continuous) (mm ²)	Volume I (mm ³)	Volume II (mm ³)			
	Sub Blok Plat Side Shell	Butt Join	3792,842	21,084	9	79968,28073	34135,578	0,000311		Vertical
		Butt Join	999,946	21,084	9	21082,86146	8999,514	0,000082		Vertical
Total 8			312922,6136					0,0191	0,2411	

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	Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)		
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)		
4	Responden 1	Downhand	Fillet Joint	Weld Main Deck and Longitudinal Deck Girder	310	9	2790	1,13	0,90	2742,39	22,62	121,24		
5					180	9	1620	1,13	0,90	1592,36	13,23	120,36		
6					165	9	1485	1,13	0,90	1459,66	15,13	96,47		
7					200	9	1800	1,13	0,90	1769,29	28,76	61,52		
8					300	9	2700	1,13	0,90	2653,93	26,6	99,77		
9					165	9	1485	1,13	0,90	1459,66	17,63	82,79		
10					170	9	1530	1,13	0,90	1503,89	17,23	87,28		
11					200	9	1800	1,13	0,90	1769,29	19,11	92,58		
12					170	9	1530	1,13	0,90	1503,89	17,75	84,73		
13					170	9	1530	1,13	0,90	1503,89	14,86	101,20		
14					165	9	1485	1,13	0,90	1459,66	12,78	114,21		
15					300	9	2700	1,13	0,90	2653,93	23,39	113,46		
16					200	9	1800	1,13	0,90	1769,29	24,27	72,90		
17					155	9	1395	1,13	0,90	1371,20	20,12	68,15		
18					210	9	1890	1,13	0,90	1857,75	15,63	118,86		
19					300	9	2700	1,13	0,90	2653,93	21,21	125,13		
20				340	9	3060	1,13	0,90	3007,78	42,03	71,56			
						Weld Main Deck and Frame 1	340	9	3060	1,13	0,90	3007,78	45,04	66,78
							340	9	3060	1,13	0,90	3007,78	42,24	71,21
							750	9	6750	1,13	0,90	6634,82	75,67	87,68
Total							46170			45382		92,89		

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 1	Overhead	Fillet Joint	Long Stif Bracket to Frame 2	180	9	1620	1,1304	0,9	1592,356688	27,24	58,45655976
2					180	9	1620	1,1304	0,9	1592,356688	22,71	70,11698317
3					180	9	1620	1,1304	0,9	1592,356688	29,46	54,05148296
4					130	9	1170	1,1304	0,9	1150,035386	15,16	75,85985394
5					260	9	2340	1,1304	0,9	2300,070771	24,44	94,11091536
6					180	9	1620	1,1304	0,9	1592,356688	14,95	106,512153
7					220	9	1980	1,1304	0,9	1946,21373	20,96	92,85370848
8					220	9	1980	1,1304	0,9	1946,21373	20,37	95,54313842
9					370	9	3330	1,1304	0,9	3273,177636	32,93	99,39804544
10					370	9	3330	1,1304	0,9	3273,177636	34,3	95,42791942
Total							20610			20258		84,23

2 Responden 2

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)



	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
Responden 2	Downhand	Fillet Joint	Weld Flat Bar to Bulkhead	525	9	4725	1,13	0,90	4644,37	40,17	115,62	
				735	9	6615	1,13	0,90	6502,12	51,47	126,33	
				545	9	4905	1,13	0,90	4821,30	51,19	94,18	
				535	9	4815	1,13	0,90	4732,84	40,44	117,03	
				550	9	4950	1,13	0,90	4865,53	43,19	112,65	
			300	9	2700	1,13	0,90	2653,93	26,58	99,85		
			380	9	3420	1,13	0,90	3361,64	37,43	89,81		
			195	9	1755	1,13	0,90	1725,05	15,07	114,47		
			201	9	1809	1,13	0,90	1778,13	14,92	119,18		
			160	9	1440	1,13	0,90	1415,43	12,83	110,32		
			170	9	1530	1,13	0,90	1503,89	15,31	98,23		
			410	9	3690	1,13	0,90	3627,03	39,58	91,64		
			180	9	1620	1,13	0,90	1592,36	13,04	122,11		
			175	9	1575	1,13	0,90	1548,12	12,9	120,01		
			168	9	1512	1,13	0,90	1486,20	14,47	102,71		
			180	9	1620	1,13	0,90	1592,36	14,28	111,51		
			120	9	1080	1,13	0,90	1061,57	10,09	105,21		
			210	9	1890	1,13	0,90	1857,75	24,78	74,97		
			240	9	2160	1,13	0,90	2123,14	26,85	79,07		
			250	9	2250	1,13	0,90	2211,61	24,08	91,84		
			160	9	1440	1,13	0,90	1415,43	14,06	100,67		
			160	9	1440	1,13	0,90	1415,43	14,28	99,12		
			160	9	1440	1,13	0,90	1415,43	13,33	106,18		
			180	9	1620	1,13	0,90	1592,36	19,05	83,59		
			220	9	1980	1,13	0,90	1946,21	21,48	90,61		
			300	9	2700	1,13	0,90	2653,93	32,96	80,52		
			250	9	2250	1,13	0,90	2211,61	24,51	90,23		
Total							68931			67754,78		101,77

3 Responden 3

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil	Luas Bidang	Volume Hasil	Luas	Efisiensi	Elektroda	Waktu (s)	Kecepatan
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (7)	(8) = (6) / (7)	
1	Responden 3	Horizontal	Fillet Joint Asimetric	Weld Keel Plat to Bottom Plat	11,9							
2					610	11,90	7259	1,13	0,90	7135,13	95,6	74,64
3					715	11,90	8508,5	1,13	0,90	8363,31	92,93	90,00
4					482	11,90	5735,8	1,13	0,90	5637,93	61,53	91,63
5					590	11,90	7021	1,13	0,90	6901,20	65,48	105,39
6					460	11,90	5474	1,13	0,90	5380,59	53,22	101,10
7					680	11,90	8092	1,13	0,90	7953,92	75,86	104,85
Total							47445,3			46635,70		92,43



No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
3	Responden 3	Horizontal	Fillet Joint	Tripping Bracket to Frame 11	180	9	1620	1,13	0,90	1289,81	14,77	87,33
4					170	9	1530	1,13	0,90	1218,15	15,88	76,71
5					160	9	1440	1,13	0,90	1146,50	16,08	71,30
6					160	9	1440	1,13	0,90	1146,50	16,81	68,20
					160	9	1440	1,13	0,90	1146,50	14,31	80,12
					300	9	2700	1,13	0,90	2149,68	22,19	96,88
Total							10170			8097,13		80,09

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 3	Vertikal	Fillet Join	Frame to Side Shell	190	9	1710	1,1304	0,9	1680,820948	24,23	69,36941594
2					180	9	1620	1,1304	0,9	1592,356688	23,04	69,11270347
3					270	9	2430	1,1304	0,9	2388,535032	33,58	71,12969124
4					125	9	1125	1,1304	0,9	1105,803255	12,6	87,76216313
Total							6885			6767,52		74,34

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 4	Overhead	Fillet Joint	Deck Beam to Plat Main Deck Frame 12	270	9	2430	1,13	0,90	2388,54	28,15	84,85
2					270	9	2430	1,13	0,90	2388,54	25,26	94,56
3					270	9	2430	1,13	0,90	2388,54	29,94	79,78
4					270	9	2430	1,13	0,90	2388,54	24,58	97,17
5					270	9	2430	1,13	0,90	2388,54	25,18	94,86
6					85	9	765	1,13	0,90	751,95	10,76	69,88
7					85	9	765	1,13	0,90	751,95	10,97	68,55
8					85	9	765	1,13	0,90	751,95	11,85	63,46
9					160	9	1440	1,13	0,90	1415,43	15,9	89,02
10					160	9	1440	1,13	0,90	1415,43	16,45	86,04
11					160	9	1440	1,13	0,90	1415,43	15,28	92,63
12					160	9	1440	1,13	0,90	1415,43	14,91	94,93
13					160	9	1440	1,13	0,90	1415,43	16,98	83,36
14					160	9	1440	1,13	0,90	1415,43	16,33	86,68
15					155	9	1395	1,13	0,90	1371,20	11,73	116,90
16					265	9	2385	1,13	0,90	2344,30	22,93	102,24



No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
21				Long Deck Girder to Maindeck between Frame 6 to 7	160	9	1440	1,13	0,90	1415,43	12,37	114,42
					270	9	2430	1,13	0,90	2388,54	22,41	106,58
					160	9	1440	1,13	0,90	1415,43	14,75	95,96
					285	9	2565	1,13	0,90	2521,23	23,05	109,38
					160	9	1440	1,13	0,90	1415,43	12,59	112,42
Total							36180			35562,63		92,56

Luas kampuh Back Gouging Frame 6-12 12,00 mm²

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil (1)	Luas Bidang (2)	Volume Hasil (3) = (1)*(2)	Luas (4) = (3) / (2)	Efisiensi (5)	Elektroda (6) = (3) / (4)*(5)	Waktu (s) (7)	Kecepatan (8) = (6) / (7)
1	M Nur Rokhim	Overhead	Butt Join	Plat Main Deck Frame 12	320	12,00	3840,00	1,13	0,90	3774,48	33	114,38
2					320	12,00	3840,00	1,13	0,90	3774,48	36	104,85
3				Main deck Frame 6	300	12,00	3600,00	1,13	0,90	3538,57	45,41	77,92
4					300	12,00	3600,00	1,13	0,90	3538,57	39,11	90,48
5					300	12,00	3600,00	1,13	0,90	3538,57	44,28	79,91
6					185	12,00	2220,00	1,13	0,90	2182,12	25,83	84,48
7					185	12,00	2220,00	1,13	0,90	2182,12	23,48	92,94
8					235	12,00	2820,00	1,13	0,90	2771,88	28,35	97,77
9				Main deck Frame 6	260	12,00	3120,00	1,13	0,90	3066,76	25,71	119,28
10					600	12,00	7200,00	1,13	0,90	7077,14	42,85	165,16
Total							36060,00			35444,68		102,72

5 Responden 5

Luas kampuh Cover 3,7 mm² Plat 8 mmLuas kampuh Fill 24,43 mm²

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil (1)	Luas Bidang (2)	Volume Hasil (3) = (1)*(2)	Luas (4) = (3) / (2)	Efisiensi (5)	Elektroda (6) = (3) / (4)*(5)	Waktu (s) (7)	Kecepatan (8) = (6) / (7)
1	Responden 5	Downhand	Butt Join	Side Shell Frame 29 to Frame 30 (Filler Pass)	305	3,70	1128,50	1,13	0,90	1109,24	16	68,26
2					310	3,70	1147,00	1,13	0,90	1127,43	16	70,03
3					290	3,70	1073,00	1,13	0,90	1054,69	18	59,15
4					310	3,70	1147,00	1,13	0,90	1127,43	20	56,20
5					300	3,70	1110,00	1,13	0,90	1091,06	16	66,16
6					300	3,70	1110,00	1,13	0,90	1091,06	19	58,75
7				Side Shell Frame 29 to Frame 30 (Cover Pass)	300	24,43	7329,00	1,13	0,90	7203,94	34	212,19
8					300	24,43	7329,00	1,13	0,90	7203,94	36	198,18
9					310	24,43	7573,30	1,13	0,90	7444,07	40	185,55
10					290	24,43	7084,70	1,13	0,90	6963,81	40	175,01
11					310	24,43	7573,30	1,13	0,90	7444,07	39	192,50
Total							43604,80			42860,74		122,00

6 Responden 6

Plat 8 mm
Luas kampuh Back Gouging Frame 6-12 12,00 mm²

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil	Luas Bidang	Volume Hasil	Luas	Efisiensi	Elektroda	Waktu (s)	Kecepatan
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No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
4	Responden 6	Downhand	Butt Joint	Plat Main Deck (Back Gouging) Frame 12 to 13	530	12,00	6360,00	1,13	0,90	6251,47	59	105,19
5					530	12,00	6360,00	1,13	0,90	6251,47	68	91,76
6					600	12,00	7200,00	1,13	0,90	7077,14	40	176,71
7					600	12,00	7200,00	1,13	0,90	7077,14	58	122,97
8					510	12,00	6120,00	1,13	0,90	6015,57	55	110,38
7					510	12,00	6120,00	1,13	0,90	6015,57	59	101,96
8					900	12,00	10800,00	1,13	0,90	10615,71	98	108,58
8					900	12,00	10800,00	1,13	0,90	10615,71	105	101,40
Total							60960,00			59919,79		114,87

7 Responden 7

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 7	Downhand	Fillet Joint	Longitudinal Stiffener Forepeak	785	9	7065,00	1,13	0,90	6944,44	64,94	106,94
2					460	9	4140,00	1,13	0,90	4069,36	34,33	118,54
3					310	9	2790,00	1,13	0,90	2742,39	22,75	120,54
4					300	9	2700,00	1,13	0,90	2653,93	23,11	114,84
5					300	9	2700,00	1,13	0,90	2653,93	22,08	120,20
6					300	9	2700,00	1,13	0,90	2653,93	22,74	116,71
7					340	9	3060,00	1,13	0,90	3007,78	29,73	101,17
8					300	9	2700,00	1,13	0,90	2653,93	35,04	75,74
Total							27855,00			27379,69		109,33

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 7	Vertikal	Fillet Joint	Trans Stiffener Forepeak	400	9	3600	1	1	3539	37	97
2					380	9	3420	1	1	3362	29	116
3					300	9	2700	1	1	2654	25	107
4					300	9	2700	1	1	2654	36	75
5					300	9	2700	1	1	2654	22	122
6					400	9	3600	1	1	3539	40	88
7					400	9	3600	1	1	3539	39	91
8					700	9	6300	1	1	6192	71	88
Total							28620,00			28131,63		97,99



No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
					Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 7	Vertikal	Fillet Join	Bracket to Deck girder dan main deck Frame 30	#REF!	9	#REF!	1,13	0,90	#REF!	#REF!	#REF!
2					#REF!	9	#REF!	1,13	0,90	#REF!	#REF!	#REF!
3					#REF!	9	#REF!	1,13	0,90	#REF!	#REF!	#REF!
4					#REF!	9	#REF!	1,13	0,90	#REF!	#REF!	#REF!
5					#REF!	9	#REF!	1,13	0,90	#REF!	#REF!	#REF!
Total							#REF!			#REF!		#REF!
8 Responden 8												

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 8	Downhand	Fillet Join	Plat Deck Wheelhouse to Long Deck Girder	255	9	2295,00	1,13	0,90	2255,84	20,23	111,51
2					185	9	1665,00	1,13	0,90	1636,59	15,05	108,74
3					175	9	1575,00	1,13	0,90	1548,12	12,78	121,14
4					245	9	2205,00	1,13	0,90	2167,37	19,28	112,42
5					255	9	2295,00	1,13	0,90	2255,84	22,65	99,60
6					175	9	1575,00	1,13	0,90	1548,12	14,79	104,67
7					255	9	2295,00	1,13	0,90	2255,84	21,14	106,71
8					175	9	1575,00	1,13	0,90	1548,12	13,12	118,00
Total							15480,00			15215,85		110,35

Plat 12 mm Luas kampuh Back Gouging Plat Bottom

10,99 mm²

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 8	Downhand	Butt Joint	Bottom Plat Transom (Maybe PL 12) (Back Gouging)	275	11	3022	1	1	2971	29	102
2					800	11	8792	1	1	8642	78	111
3					400	11	4396	1	1	4321	37	118
4					1210	11	13298	1	1	13071	113	116
5					985	11	10825	1	1	10640	81	131
6					725	11	7968	1	1	7832	62	126
7					505	11	5550	1	1	5455	47	115
8					495	11	5440	1	1	5347	44	121
Total							59291,05			58279,32		117,46



Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
				(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)

Responden 9

Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
				(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 9	Downhand	Long Stif to SS Fr 27-27,5	580	9	5220,00	1,13	0,90	5130,93	57,48	89,26
2				580	9	5220,00	1,13	0,90	5130,93	59,19	86,69
3				580	9	5220,00	1,13	0,90	5130,93	63,94	80,25
4				580	9	5220,00	1,13	0,90	5130,93	58,50	87,71
5				580	9	5220,00	1,13	0,90	5130,93	64,86	79,11
6				580	9	5220,00	1,13	0,90	5130,93	59,02	86,94
7			Long Stif to SS Fr 27-27,5	580	9	5220,00	1,13	0,90	5130,93	63,29	81,07
8				580	9	5220,00	1,13	0,90	5130,93	61,87	82,93
9				580	9	5220,00	1,13	0,90	5130,93	58,04	88,40
10			Long Stif to SS Fr 27-27,5	580	9	5220,00	1,13	0,90	5130,93	64,85	79,12
11				580	9	5220,00	1,13	0,90	5130,93	64,73	79,27
12				300	9	2700,00	1,13	0,90	2653,93	32,07	82,75
13				300	9	2700,00	1,13	0,90	2653,93	34,60	76,70
Total						41760,00			41047,42		84,24

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 9	Downhand	Fillet Joint	Long Stif to SS Deckhouse	210	9	1890	1	1	1858	21	89
2					150	9	1350	1	1	1327	15	89
3					150	9	1350	1	1	1327	14	98
4					300	9	2700	1	1	2654	27	98
5					450	9	4050	1	1	3981	42	96
6					270	9	2430	1	1	2389	23	102
Total						13770,00			13535,03		95,39	

10 Responden 10

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1				Long Deck Beam to	235	9	2115,00	1,13	0,90	2078,91	20,56	101,11
2				Trans Deck Beam	160	9	1440,00	1,13	0,90	1415,43	12,56	112,69



Kesponden 10

7
8
9
10
11
12

Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
				(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
Kesponden 10	Vertikal	Fillet Joint	Deckhouse	235	9	2115,00	1,13	0,90	2078,91	23,64	87,94
			Tripping Bracket to Deck Beam Deckhouse	235	9	2115,00	1,13	0,90	2078,91	19,54	106,39
				160	9	1440,00	1,13	0,90	1415,43	13,23	106,99
				160	9	1440,00	1,13	0,90	1415,43	12,89	109,81
			Long Deck Beam to Trans Deck Beam Deckhouse	235	9	2115,00	1,13	0,90	2078,91	25,36	81,98
				160	9	1440,00	1,13	0,90	1415,43	12,73	111,19
				160	9	1440,00	1,13	0,90	1415,43	15,60	90,73
	260	9	2340,00	1,13	0,90	2300,07	29,69	77,47			
	260	9	2340,00	1,13	0,90	2300,07	33,43	68,80			
	260	9	2340,00	1,13	0,90	2300,07	29,96	76,77			
Total						14220,00			13977,35		102,26

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 10	Horizontal	Fillet Joint	Long Stiffener to Side Shell Deckhouse	235	9	2115	1	1	2079	21	101
2					160	9	1440	1	1	1415	13	113
3					235	9	2115	1	1	2079	24	88
4					235	9	2115	1	1	2079	20	106
5				Bracket Long Stiffener	160	9	1440	1	1	1415	13	107
6					160	9	1440	1	1	1415	13	110
7				Long Stiffener to Side Shell Deckhouse	235	9	2115	1	1	2079	25	82
8					160	9	1440	1	1	1415	13	111
9					160	9	1440	1	1	1415	16	91
10				Long Deck Beam to Trans Deck Beam Deckhouse	260	9	2340	1	1	2300	30	77
Total						14220,00			13977,35		102,26	

No.	Juru Las	Posisi	Jenis Joint	Pekerjaan Konstruksi	Panjang Hasil Las (mm)	Luas Bidang las (mm ²)	Volume Hasil Las (mm ³)	Luas Elektroda (mm ²)	Efisiensi Elektroda	Elektroda Terpakai (mm)	Waktu (s)	Kecepatan Pengelasan (mm/s)
					(1)	(2)	(3) = (1)*(2)	(4) = (3) / (2)	(5)	(6) = (3) / (4)*(5)	(7)	(8) = (6) / (7)
1	Responden 10	Horizontal	Fillet Joint	Bracket Frame Deckhouse to Main Deck	230	9	2070	1	1	2035	23	87
2					430	9	3870	1	1	3804	42	91
3					230	9	2070	1	1	2035	24	86
Total						8010,00			7873,32		87,72	