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LAMPIRAN

Lampiran 1: Hasil Wawancara

No.	Responden	Pertanyaan	Pernyataan Responden
1.	*Captain*	1) Apa faktor penyebab terjadinya kegagalan *cleaning palka*?	- Kondisi cuaca yang tidak bersahabat pada saat dilakukan pembersihan. - Kurangnya persiapan sebelum dilakukan pembersihan
		2) Apa saja kendala yang dihadapi dalam pelaksanaan *cleaning palka*?	- Keterbatasan sumber daya - Kurangnya waktu pada saat dilaksanakan pembersihan
		3) Upaya apa yang dilakukan untuk meningkatkan kualitas pembersihan palka?	- Memperhatikan kembali cuaca pada saat akan melaksanakan pembersihan - Membuat jadwal pembersihan yang teratur dan sistematis - Menggunakan peralatan kebersihan yang praktis dan efektif
2.	*Chief Officer*	1) Apa faktor penyebab terjadinya kegagalan	- Kurangnya pengawasan inspeksi pada saat dilakukan pembersihan

		cleaning palka?	- Jenis muatan sebelumnya sulit dibersihkan
		2) Apa saja kendala yang dihadapi dalam pelaksanaan *cleaning palka*?	- Jenis muatan sebelumnya sulit dibersihkan - Kondisi palka yang sulit dijangkau
		3) Upaya apa yang dilakukan untuk meningkatkan kualitas pembersihan palka?	- Melakukan evaluasi dan perbaikan berkelanjutan terhadap proses pembersihan - Melakukan inspeksi dan pengawasan yang ketat selama proses pembersihan - Menerapkan sistem manajemen kualitas untuk memastikan standar pembersihan yang tinggi.
3.	Bosun	1) Apa faktor penyebab terjadinya kegagalan *cleaning palka*?	- Kurangnya pengetahuan kru kapal terhadap prosedur *cleaning palka* khususnya muatan curah - Penggunaan peralatan dan bahan pembersih yang tidak sesuai
		2) Apa saja kendala yang dihadapi	- Peraturan dan persyaratan yang ketat terkait dengan pembersihan palka

		dalam pelaksanaan *cleaning palka*?	khususnya muatan makanan. - Kondisi kesehatan dan keselamatan kerja
		3) Upaya apa yang dilakukan untuk meningkatkan kualitas pembersihan palka?	- Menyediakan pelatihan dan sertifikasi untuk kru kapal tentang prosedur *cleaning palka*. - Menggunakan peralatan yang benar dan bahan pembersihan yang lebih efektif dan ramah lingkungan - Lebih memperhatikan kesehatan dan keselamatan pada saat pembersihan palka.

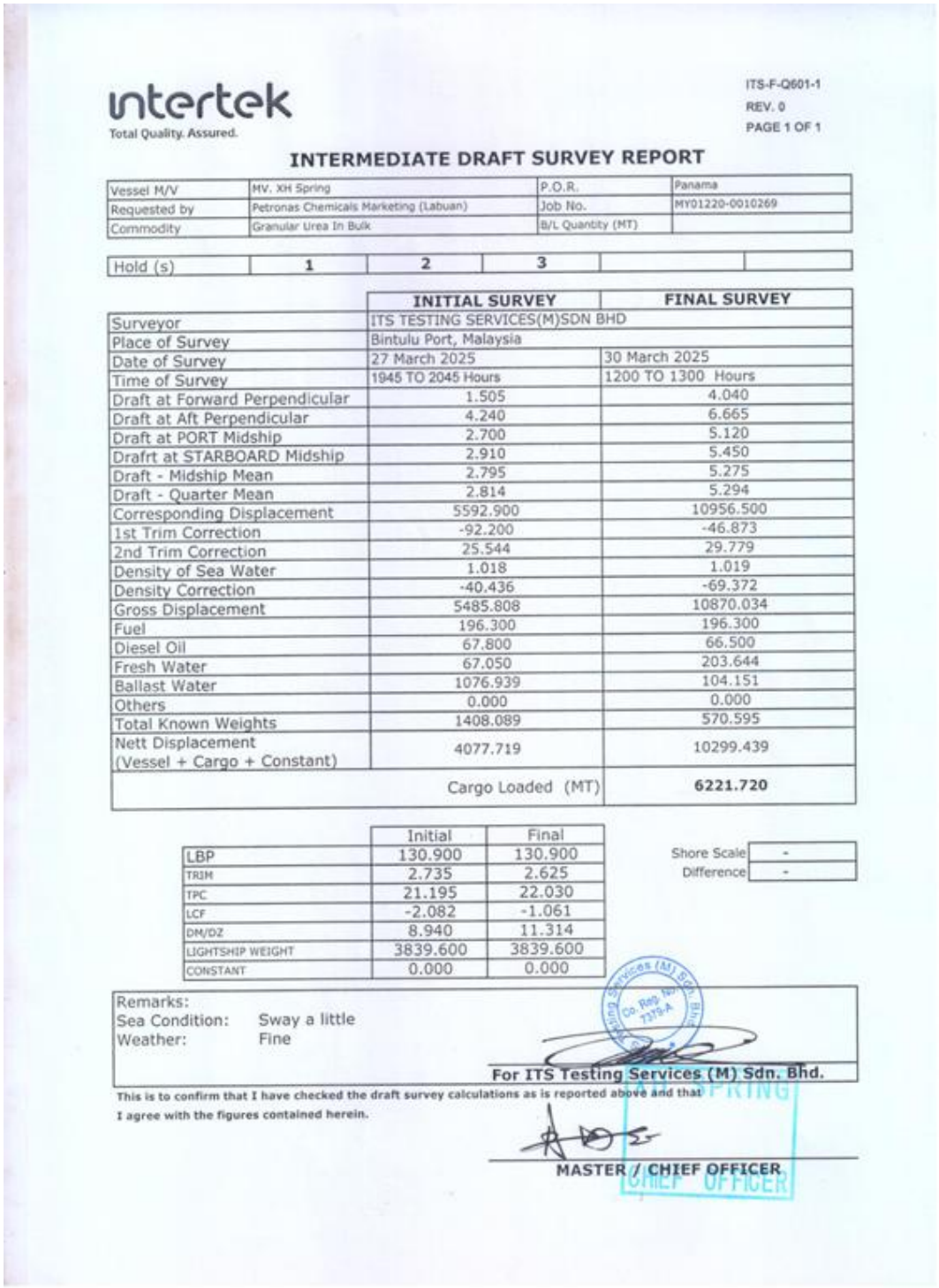
Lampiran 2: Dokumentasi Wawancara dengan *Captain* dan *Chief Officer*



Lampiran 3: Dokumentasi Wawancara dengan Bosun



Lampiran 4: *Intermediate Draft Survey Report*



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ITS-F-Q601-1
REV. 0
PAGE 1 OF 1

INTERMEDIATE DRAFT SURVEY REPORT

Vessel M/V	MV. XH Spring	P.O.R.	Panama
Requested by	Petronas Chemicals Marketing (Labuan)	Job No.	MY01220-0010269
Commodity	Granular Urea In Bulk	B/L Quantity (MT)	

Hold (s)	1	2	3		

	INITIAL SURVEY	FINAL SURVEY
Surveyor	ITS TESTING SERVICES(M)SDN BHD	
Place of Survey	Bintulu Port, Malaysia	
Date of Survey	27 March 2025	30 March 2025
Time of Survey	1945 TO 2045 Hours	1200 TO 1300 Hours
Draft at Forward Perpendicular	1.505	4.040
Draft at Aft Perpendicular	4.240	6.665
Draft at PORT Midship	2.700	5.120
Drafrt at STARBOARD Midship	2.910	5.450
Draft - Midship Mean	2.795	5.275
Draft - Quarter Mean	2.814	5.294
Corresponding Displacement	5592.900	10956.500
1st Trim Correction	-92.200	-46.873
2nd Trim Correction	25.544	29.779
Density of Sea Water	1.018	1.019
Density Correction	-40.436	-69.372
Gross Displacement	5485.808	10870.034
Fuel	196.300	196.300
Diesel Oil	67.800	66.500
Fresh Water	67.050	203.644
Ballast Water	1076.939	104.151
Others	0.000	0.000
Total Known Weights	1408.089	570.595
Nett Displacement (Vessel + Cargo + Constant)	4077.719	10299.439
	Cargo Loaded (MT)	**6221.720**

	Initial	Final
LBP	130.900	130.900
TRIM	2.735	2.625
TPC	21.195	22.030
LCF	-2.082	-1.061
DM/DZ	8.940	11.314
LIGHTSHIP WEIGHT	3839.600	3839.600
CONSTANT	0.000	0.000

Shore Scale	-
Difference	-

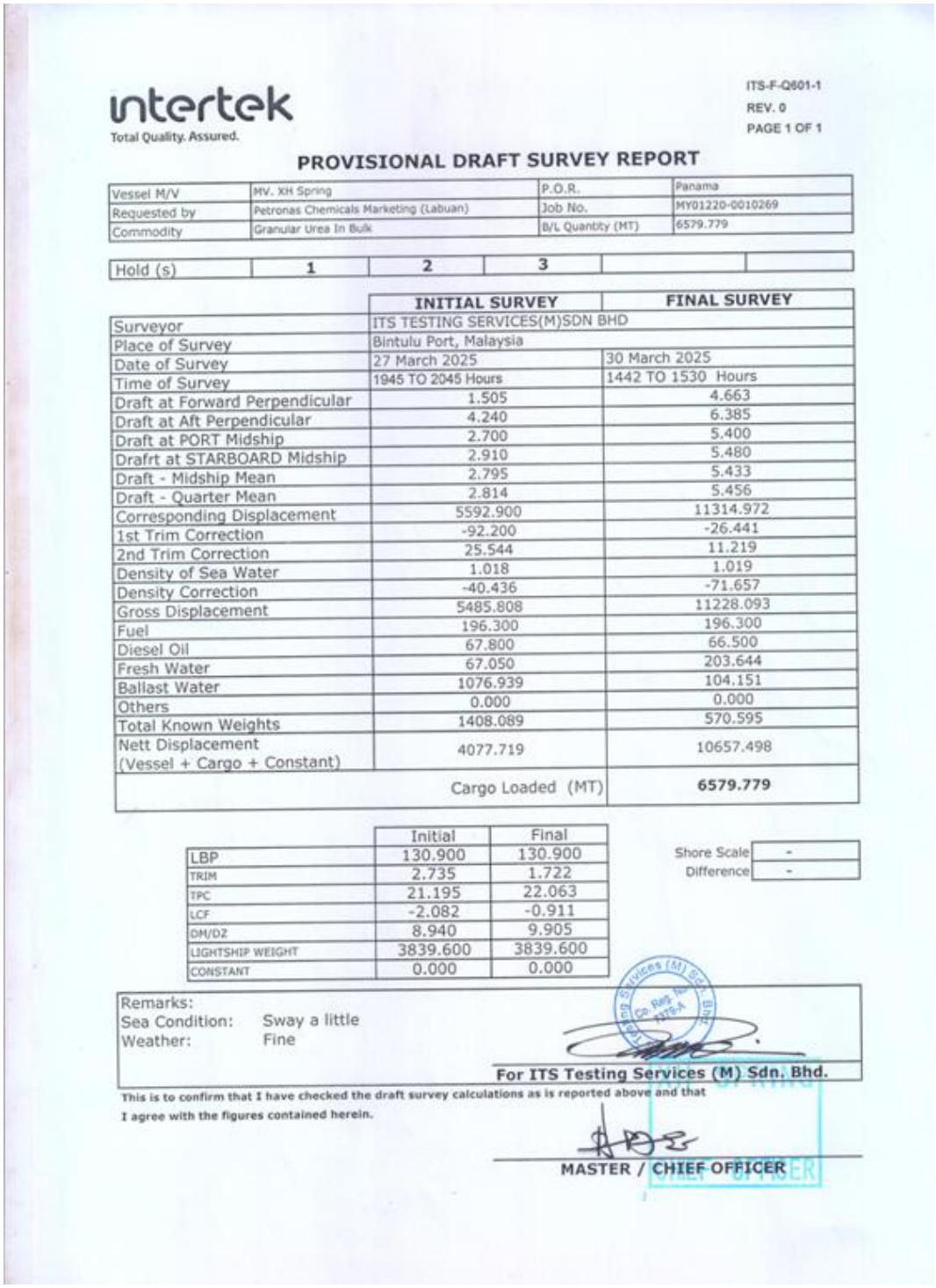
Remarks:
Sea Condition: Sway a little
Weather: Fine

For ITS Testing Services (M) Sdn. Bhd.

This is to confirm that I have checked the draft survey calculations as is reported above and that I agree with the figures contained herein.

MASTER / CHIEF OFFICER

Lampiran 5: *Provisional Draft Survey Report*



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REV. 0
PAGE 1 OF 1

PROVISIONAL DRAFT SURVEY REPORT

Vessel M/V	MV. XH Spring	P.O.R.	Panama
Requested by	Petronas Chemicals Marketing (Labuan)	Job No.	MY01220-0010269
Commodity	Granular Urea In Bulk	B/L Quantity (MT)	6579.779

Hold (s)	1	2	3		

	INITIAL SURVEY	FINAL SURVEY
Surveyor	ITS TESTING SERVICES(M)SDN BHD	
Place of Survey	Bintulu Port, Malaysia	
Date of Survey	27 March 2025	30 March 2025
Time of Survey	1945 TO 2045 Hours	1442 TO 1530 Hours
Draft at Forward Perpendicular	1.505	4.663
Draft at Aft Perpendicular	4.240	6.385
Draft at PORT Midship	2.700	5.400
Drafrt at STARBOARD Midship	2.910	5.480
Draft - Midship Mean	2.795	5.433
Draft - Quarter Mean	2.814	5.456
Corresponding Displacement	5592.900	11314.972
1st Trim Correction	-92.200	-26.441
2nd Trim Correction	25.544	11.219
Density of Sea Water	1.018	1.019
Density Correction	-40.436	-71.657
Gross Displacement	5485.808	11228.093
Fuel	196.300	196.300
Diesel Oil	67.800	66.500
Fresh Water	67.050	203.644
Ballast Water	1076.939	104.151
Others	0.000	0.000
Total Known Weights	1408.089	570.595
Nett Displacement (Vessel + Cargo + Constant)	4077.719	10657.498
	Cargo Loaded (MT)	**6579.779**

	Initial	Final
LBP	130.900	130.900
TRIM	2.735	1.722
TPC	21.195	22.063
LCF	-2.082	-0.911
DM/DZ	8.940	9.905
LIGHTSHIP WEIGHT	3839.600	3839.600
CONSTANT	0.000	0.000

Shore Scale	-
Difference	-

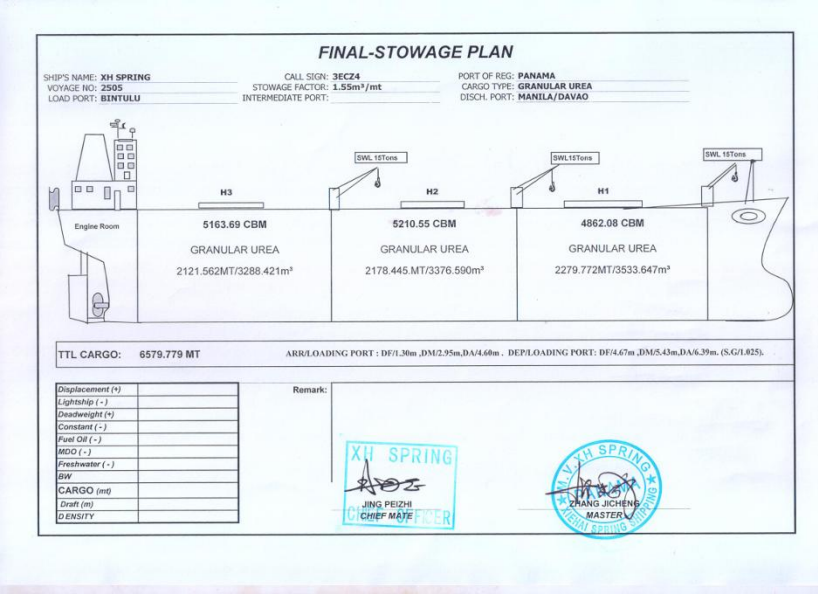
Remarks:
Sea Condition: Sway a little
Weather: Fine

For ITS Testing Services (M) Sdn. Bhd.

This is to confirm that I have checked the draft survey calculations as is reported above and that I agree with the figures contained herein.

MASTER / CHIEF OFFICER

Lampiran 6: *Final Stowage Plan*



FINAL-STOWAGE PLAN

SHIP'S NAME: XH SPRING
VOYAGE NO: 2505
LOAD PORT: BINTULU
CALL SIGN: 3ECZ4
STOWAGE FACTOR: 1.55m³/mt
INTERMEDIATE PORT:
PORT OF REG: PANAMA
CARGO TYPE: GRANULAR UREA
DISCH. PORT: MANILA/DAVAO

H3	H2	H1
5163.69 CBM	5210.55 CBM	4862.08 CBM
GRANULAR UREA	GRANULAR UREA	GRANULAR UREA
2121.562MT/3288.421m³	2178.445.MT/3376.590m³	2279.772MT/3533.647m³

Engine Room
SWL 15Tons
SWL 15Tons
SWL 15Tons

TTL CARGO: 6579.779 MT

ARR/LOADING PORT : DF/1.30m ,DM/2.95m,DA/4.60m . DEP/LOADING PORT: DF/4.67m ,DM/5.43m,DA/6.39m. (S.G/1.025).

Displacement (+)	
Lightship (-)	
Deadweight (+)	
Constant (-)	
Fuel Oil (-)	
MDO (-)	
Freshwater (-)	
BW	
CARGO (mt)	
Draft (m)	
DENSITY	

Remark:

XH SPRING
JING PEIZHI
CHIEF MATE

M.V. XH SPRING
ZHANG JICHENG
MASTER

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MASTER / CHIEF OFFICER

VESSEL : MV. XP Spring
PORT : Bintulu Port, Malaysia
DATE : 27 March 2025

VOYAGE NO. : V2505

RE:LOADING OF Granular Urea In Bulk.

LOADING COMMENCED : 0920 hours on 28 / 03 / 2025
LOADING COMPLETED : 1442 hours on 30 / 03 / 2025
CARGO : Granular Urea In Bulk.

DETAILS AS FOLLOWS :-

SHIPPER	QUANTITY LOADED EX SHORE SCALE (MT)	LESS SPILLAGE (MT)	QUANTITY LOADED (MT)	STOWAGE / HOLD
Asean Bintulu Fertilizer Sdn Bhd	-	-	2279.772	1
	-	-	2178.445	2
	-	-	2121.562	3
	-	-	-	-
	-	-	-	-
TOTAL			6579.779	

QUANTITY LOADED 6579.779 METRIC TONS

Acknowledge Receipt

XH SPRING

SURVEYOR

MASTER / CHIEF OFFICER

Lampiran 7: *Certificate of Cargo Hold Inspection*



TO WHOM IT MAY CONCERN

VESSEL LOADING COMPARTMENT - **GMP** VOYAGE NO. V2505

MOTOR VESSEL	:	MV XH Spring
P.OR / BUILT	:	Panama / 2008
NAME OF OWNER	:	Xie Hai Spring Shipping Pte Ltd
INTENDED CARGO TO LOAD	:	Granular Urea In Bulk.
QUANTITY	:	6,579.779 Metric Tons
LOADING PORT	:	Bintulu Port, Malaysia
INTENDED DESTINATION	:	Davao Port & Manila Port, Philippines
SHIPPER	:	Petronas Chemicals Marketing (Labuan) Ltd
CARGO HOLD NO(S)	:	1, 2 & 3

I, Master of the vessel certify that prior to commencement of the loading the vessel's holds were practically free from infestation (dead and live insects), clean and dry, free from smell and the hatches were found to be in order and can be closed tightly.

The last three cargoes carried :-

Last Cargo : Steel Billet In Bulk

2nd Last Cargo : Tapioca Chips In Bulk

3rd Last Cargo : Wheat Bran Pallets In Bulk

Last holds cleaning activities reported by the vessel : 26 / 03 / 2025

Cleaning Methods reported by the vessel : 1) Washing with sea water and fresh water
2) Sweeping, moping & drying

Based here upon we certify that the Vessel's Cargo Hold(s) is / are suitable to carry the above mentioned cargo in bulk, as far as visually could be ascertained.

The following hold(s) partly loaded at previous port(s) / berth(s) under this voyage.

Hold Number(s) : NIL

Artificial separation (to be) applied in : Not Applicable Material : Not Applicable

~~We ascertained that the separators / stowages of this cargo were found to be in good order and good condition and certify the compartment(s) is / are suitable to carry the above mentioned current cargo in bulk.~~

I, on behalf of the Ship's Owner, acknowledge fully responsibility for the above declaration.

Place and date of issue : Bintulu Port, Malaysia and 27 / 03 / 2025

Master / Chief Officer

XH SPRING
CHIEF OFFICER

Name :

CERTIFICATE OF LAST CARGO & CLEANING ACTIVITIES
LOADING COMPARTMENTS / HOLDS

Name of Vessel	:	MV. Spring
Cargo Description	:	Granular Urea In Bulk.
Quantity	:	6579.779 Metric Tons
Supplier	:	Petronas Chemicals Marketing (Labuan) Ltd
Buyer	:	To Order
Port of Loading	:	Bintulu Port, Malaysia
Date	:	27 March 2025
Port of Discharging	:	Davao Port & Manila Port, Philippines

This is to certify the followings :-

Last Cargo

Hold No.	Last Cargo	2nd Last Cargo	3rd Last Cargo
1, 2 & 3	Steel Billet In Bul	Tapioca Chips In Bulk	Wheat Bran Pallets In Bulk

Cleaning Methods

Hold No.	Cleaning Method
1, 2 & 3	1) Washing with sea water and fresh water 2) Sweeping, moping & drying

Certified by Master / Chief Officer

(Signature & Vessel's Stamp)

Date : 27 / 03 / 2025

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Our Ref : MY01220-0010269

Date : 27 March 2025

To Whom It May Concern

CERTIFICATE OF CARGO HOLDS CLEANLINESS

VESSEL : MV XH Spring

This is to certify that we attended on board the vessel at the vessel at Bintulu Port, Malaysia at 2045 to 2200 hours on 27 / 03 / 2025 for the purpose of visually inspecting for cleanliness of the cargo hold(s) as nominated below for the carriage of Granular Urea In Bulk.

The Vessel's Cargo Hold(s) designated to received the said product was / were Cargo Hold No(s) 1, 2 & 3 which was / were inspected and found dry and clean and suitable to receive the nominated cargo at time and place of visual inspection.

"THIS CERTIFICATE IS ISSUED WITHOUT PREJUDICE"

ITS TESTING SERVICES (M) SDN BHD

XH SPRING
CHIEF OFFICER

LOADING COMPARTMENT INSPECTION - GMP

Vessel / ~~Barge / Railcar~~ : MV XH Spring
Date / Time / Location : 27 / 03 / 2025 @ 1848 at Bulk Cargo Wharf, Bintulu Port, Malaysia
Parcel : Granular Urea In Bulk.
Principal : Petronas Chemicals Marketing (Labuan) Ltd

Vessel has to be : CLEAN, DRY, FREE OF SMELL (Free from smell which is a burden for the goods to be loaded, like oil, fishmeal, cocoa, coffee, onions, chemicals and mouldy smell. Free from infestation, in good condition, lockable and free rust)

Arrival / Date & Time	:	Bintulu Port, Malaysia on 26 / 03 / 2025 at 0042 hours
Last Cargo	:	Steel Billet In Bulk
2nd Last Cargo	:	Tapioca Chips In Bulk
3rd Last Cargo	:	Wheat Bran Pallets In Bulk
	:	
Number of Hold(s)	:	1, 2 & 3
Number of Compartment(s)	:	NA
Last Hold Cleaning activities	:	26 / 03 / 2025
Other cargo to be loaded in the hold(s)	:	NIL
Product	:	NIL
Separation / stowage to applied	:	NIL
Other cargo already loaded in the hold(s)	:	NIL
Product	:	NIL
Separation / stowage found to be	:	NIL
Material	:	NIL

MARK WHERE / FILL IN THE COLUMN AS APPROPRIATE	1ST INSPECTION			2ND INSPECTION REJECTED ITEMS, FOUND OK		
	Y	N	REASON	Y	N	REASON
BOTTOM	√		CLEAN			
SIDES	√		CLEAN			
STRENGTHENING	√		CLEAN			
CROSS BARS	√		CLEAN			
LOWERSIDE HATCHES remnant prev. cargo	√		CLEAN			
FREE FROM OBSTACLES (wood/hatchs,etc)	√		CLEAN			
APPROVED	√					
DATE + TIME	27 / 03 / 2025 @ 2045 to 2200					
NAME OF INSPECTOR(S)	ITS SURVEYOR					
SIGNATURE OF INSPECTOR(S)						
NAMA OF CHIEF OFFICER(S)						
SIGNATURE OF CHIEF OFFICER(S)						

XH SPRING CHIEF OFFICER

Note : Please write in attachment if space provided is insufficient

Lampiran 8: *Crew List*

M/V XH SPRING IMO CREW LIST

1. Name of ship M/V : XH SPRING				2. Port of arr. HONG KONG		3. Date of arrival :19/12/2024		
4. Nationality of ship PANAMA				5. LAST Port of call XIUYU		7.passport	8. embarkation	9.SEAMAN BOOK
9. No.	10. Family name, given names	11. Rank	12. Sex	13. Nationality	14.Date and place of birth	no&expiry date	date & port	no&expiry date
1	CHEN RUIXIU	MASTER	MALE	CHINA	1987/06/24	EE8941681	2024.01.15	A90223074
					GUANGXI	2028/12/13	ZHOUSHAN	2027/05/26
2	LI NING	C/O	MALE	CHINA	1986/06/26	EF4089462	2024.04.01	A90074995
					SHANDONG	2029/02/18	TAIZHOU	2025/12/23
3	DUONG VAN TRUNG	2/O	MALE	VIETNAM	1993/04/14	P02221813	2024.03.07	HPG-39406-01
					HAI PHONG	2033/06/13	HOCHIMINH	UNLIMITED
4	VU VAN TUAN	3/O	MALE	VIETNAM	1990/02/26	C9367739	2024.03.07	HPG-16793
					THANH HOA	2030/11/17	HOCHIMINH	UNLIMITED
5	LI WENBIN	C/E	MALE	CHINA	1973/10/07	ED1368294	2024.12.08	A90406297
					GUANGDONG	2028/05/10	FANGCHENG	2029/02/23
6	WANG WEIDONG	2/E	MALE	CHINA	1969/11/17	EJ4868681	2024.01.15	A90171929
					SHANDONG	2031/11/21	ZHOUSHAN	2026/11/08
7	NGUYEN VAN CHAU	3/E	MALE	VIETNAM	1981/04/13	C3797675	2024.03.07	HCM-03302
					THANH HOA	2027/08/23	HOCHIMINH	UNLIMITED
8	MAC VAN KHUONG	4/E	MALE	VIETNAM	1990/05/21	C9874480	2024.10.17	HPG-25869
					QUANG NINH	2031/11/25	PHUMY	UNLIMITED
9	WANG XUTAO	E/E	MALE	CHINA	1978/01/16	E68992610	2024.12.15	A90421274
					JIANGSU	2026/02/18	XIUYU	2029/04/28
10	YU XUEQIANG	BSN	MALE	CHINA	1981/06/06	EC0989771	2024.12.08	A90336826
					SHANDONG	2028/04/02	FANGCHENG	2028/05/23
11	LUO RUIJIE	A/B	MALE	CHINA	1999/02/28	EF4434302	2024.12.08	A90393573
					JIANGXI	2029/02/13	FANGCHENG	2028/12/15
12	WU QIXUAN	A/B	MALE	CHINA	1976/07/26	EJ3374907	2024.12.08	A90170475
					HENAN	2031/11/24	FANGCHENG	2026/11/03
13	TRAN QUANG UY	A/B	MALE	VIETNAM	1999/11/02	C7997937	2024.03.07	VN016009-01
					THAI BINH	2029/08/09	HOCHIMINH	UNLIMITED
14	DANU RIFKI GHOZALI	OS	MALE	INDONESIA	2000/07/09	E7147762	2024.05.15	J027501
					KUDUS	2034/04/23	MAKASSAR	2027/04/03
15	MUHAMMAD WAHYUNIANSYAH	DC	MALE	INDONESIA	2003/06/02	E7689656	2024.08.31	J007380
					BONTANG	2034/05/28	MAKASSAR	2027/05/12
16	ERLAN DEFVANKA BAHARI	DC	MALE	INDONESIA	2003/05/15	E5596991	2024.08.31	J061951
					BANYUMAS	2034/02/24	MAKASSAR	2027/07/02
17	LIU HAIGUANG	FTR	MALE	CHINA	1990/06/14	EH7899059	2024.07.25	A90433565
					SHANDONG	2029/12/01	QINZHOU	2029/06/26
18	TRUONG VAN BINH	OLR	MALE	VIETNAM	1986/07/03	C9974974	2024.11.07	VN019787-01
					THANH HOA	2032/01/27	PHUMY	UNLIMITED
19	DO VAN KHOA	OLR	MALE	VIETNAM	1986/03/12	C9337088	2024.03.07	VN020307-01
					HAI PHONG	2030/09/18	HOCHIMINH	UNLIMITED
20	HOANG VAN HUNG	OLR	MALE	VIETNAM	1982/10/22	C9128041	2024.03.07	VN018210-01
					NGHE AN	2030/05/14	HOCHIMINH	UNLIMITED
21	INDRA CAHYA APRIL YANDY	WIPER	MALE	INDONESIA	1999/04/19	E8207629	2024.08.31	J052577
					KAB.SEMARANG	2034/08/02	MAKASSAR	2027/07/10
22	ZHEN SHAOFENG	C/CK	MALE	CHINA	1977/08/14	EE8670401	2024.10.09	A90131320
					LIAO NING	2028/12/17	QINZHOU	2026/06/29

Master's Signature and ship stamp:

M.V.XH SPRING PANAMA

XH SPR

Lampiran 9: *Ship Particular*

SHIP'S PARTICULARS

SHIP'S NAME	XH SPRING	CALL SIGN	3ECZ4
SHIP'S OWNER	XIE HAI SPRING SHIPPING PTE LTD	SHIP'S MANAGER	XIEHAI SHIPPING MANAGEMENT(NINGBO)CO LTD
ADDRESS	6 RAFFLES QUAY #14-06 SINGAPORE (048580)	ADDRESS	LEVEL 15-2 NO.371 HAIYUAN NORTH ROAD, NO.426 NINGDONG ROAD, NINGBO, CHINA
TYPE OF SHIP	GENERAL CARGO	SERVICE AREA	UNRESTRICTED AREA
SHIP BUILDER	ZHE JIANG HONG GUAN SHIPYARD CO.LTD ZHISHAN BRANCH	KEEL-LAYING DATE	DEC 2006
		DATE OF DLIVERY	April 2008
CLASS	INTERNATIONAL REGISTER OF SHIPPING	OFFICIAL NO.	54013-PEXT-F
		CLASS NO.	18NGG036
NATIONALITY	PANAMA	PORT OF REGISTER	PANAMA
IMO NO.	9480095	MMSI NO.	351484000
LOA	139.3M	LBP	130.9M
BREADTH MOULDED	19.00M	DEPTH MOULDED	9.80M
GRT-INTERNATIONAL	7457	NRT- INTERNATIONAL	4156
HEIGHT FROM KEEL TO HATCH COAMING	11.700M	HEIGHT FROM KEEL TO HIGHEST POINT	34.50M
E-MAIL	xhspring@marimail.com	CONSTANTS	120 MT
INMARSAT TEL CELLPHONE NO.	+86 2166938604	INMARSAT-C	437400370

CONDITION	DWT	DISPLACEMENT	FREEBOARD	DRAFT	TPC
SUMMER	11224.30MT	15063.90MT	2.720M	7.114M	23.116
TROPICAL	11535.15MT	15374.75MT	2.572M	7.262M	23.200
WINTER	10882.41MT	14722.01MT	2.868M	6.966M	23.027
FRESH WATER	11600.25MT	15439.85MT	2.558M	7.276M	23.218
LIGHT SHIP	3839.60MT		FRESH WATER ALLOWANCE		162MM

TANK CAPACITY(M^3)

CARGO HOLD	15236.32M^3	FUEL OIL TANK	459.425M^3
DIESEL OIL TANK	183.872 M^3	FRESH WATER TANK	209.34 M^3
BALLAST TANK	3953.85M^3	LUB.OIL TANK	15.70 M^3

DETAIL OF CARGO HOLD(M^3)

HOLD/HATCH	GRAIN(M^3)	TANK TOP STRENGTH	HATC COVER SIZE	HOLD DIEMENSION
NO.1 CH	4862.08M^3	7.593T/M^2	25.9 X11.2 M	【5.8X20+10.35X15.3】X10.4M
NO.2 CH	5210.55 M^3	6.83T/M^2	25.9 X11.2 M	32.5 X 15.3 X 10.4M
NO.3 CH	5163.69M^3	7.117T/M^2	25.9 X11.2 M	【10X15.3+22.2X10.7】X 10.4 M

MAIN ENGINE	6N330-EN	CRANE	20MT X 30M X 3 SETS
ECO SPEED	9.0KTS	HATCH COVER TYPE	PONTOON TYPE
RATED POWER	2574 KW	HOLD VENTILATION	MECHANICAL
BUNKER DAILY CONS AT SEA	IFO 380CST 6.3MT	PROPELLER	FIXED PITCH
		LIGHT VOLTAGE	220V/50HZ
BUNKER DAILY CONS IN PORT	WORKING:MGO 1.7 MT	LOADING COMPUTER	NA
	IDEL: MGO 0.5 MT	COMPLEMENT	25P

Lampiran 10: Foto Peneliti





RIWAYAT HIDUP



MUHAMMAD WAHYUNIANSYAH, lahir di Bontang pada tanggal 2 Juni 2003. Merupakan anak pertama dari Bapak Muhtar dan Ibu Nursanti. Penulis berkebangsaan Indonesia dan beragama Islam. Penulis menyelesaikan pendidikan di Sekolah Dasar Yayasan Pendidikan Prima Swarga Bara 2 Sangatta Utara pada tahun 2016, kemudian melanjutkan pendidikan di Sekolah Menengah Pertama Islam Terpadu Darul Hikmah Boarding School Bontang dan menyelesaikan pendidikan pada tahun 2019. Penulis kembali melanjutkan pendidikan di Sekolah Menengah Kejuruan Negeri 2 Sangatta Utara dengan Jurusan Nautika Kapal Niaga dan selesai pada tahun 2022. Setelah itu, penulis melanjutkan pendidikan ke Perguruan Tinggi yang ada di Sulawesi Selatan tepatnya di Kota Makassar, yaitu Politeknik Ilmu Pelayaran Makassar Angkatan XLIII dengan jurusan Nautika. Penulis telah melakukan Praktik Laut selama 1 tahun di MV. XH SPRING, perusahaan milik *XIE HAI SPRING SHIPPING PTE LTD* pada tanggal 31 Juli 2024 hingga 1 Agustus 2025 dan telah melakukan penelitian dengan judul "ANALISIS KEGAGALAN *CLEANING* PALKA PADA MV. XH SPRING"