



MV ATLANTIC DAWN



Transport Manual

Vessel: MV Atlantic Dawn

Project:...

Client: ...

Port of Loading: XXX

Port of Discharge: XXX
XXX

Reference: 1909_1

Date: XXX

Revision: 02

Author: XXX

Checked by: XXX

Table of Contents

1. General project overview	3
1.1 Project description	3
1.2 Scope op document	3
1.3 Abbreviations	3
2 Points of contacts	4
2.1 Vessel	4
2.2 Hartman Shipping 1 BV.	4
2.3 Ocean 7	4
2.4 Client contacts	4
3 Project details	5
3.1 Vessel	5
3.2 Main Cargo	6
3.3 Voyage	6
4 Procedures	7
4.1 Before cargo operation	7
4.2 Loading	7
4.3 During voyage	8
4.4 Before discharge operation	8
4.5 Discharging	8
5. Cargo Plan	8
5.1 Stowage Plan	9
5.2 Lift plan	10
5.2.1 Lift plans	10-11
5.2.2 Lifting equipment	12
5.3 Lashing & Securing	13
5.4 Stability Calculation	14-15
6. HSE guidelines	16
6.1 Introduction	16
6.2 Individual responsibility	16-17
6.3 Personnel protective equipment matrix	18
6.4 Emergency response	18
6.5 Safety Plan	19
6.6 Risk Assessment	20-21
6.7 Corrective Action	21
Annex – 1	22-24
Annex – 2	25
Annex – 3	26-29
Annex – 4	30-53
Annex – 5	54-87

1. General project overview

1.1 Project description

1.2 Scope of document

This transport manual is specially created for this project. It can be regarded as the most optimal plan for this project. However, due to weather conditions or other occurrences deviations of the plan can be necessary. Deviations may be made on the principles of good and safe seamanship and will be made in conjunction with the master of the vessel and the client.

This document will provide a clear understanding of the work and will give critical information associated with each activity to be undertaken. It will help to ensure safe and efficient performance of the operations to be carried out during this project.

If you need any more information than listed in this transport manual, please contact Hartman Shipping.

The content of this transport manual cannot serve as a ground for claiming any right whatsoever in respect of Hartman Shipping or Ocean 7. This document is subject to modification, printing and misprints errors reserved. If found any errors or false information please contact Hartman Shipping.

1.3 Abbreviations

In this document several abbreviations are made. Definitions are given below.

ETA Estimated Time of Arrival

NM Nautical Miles

MT Metric tons

IMO International Maritime Organization

MARPOL International Marine Pollution Convention

SOLAS Safety of Life at Sea Convention

SMS Safety Management System

ISM internal safety management

PPE personnel protective equipment

STCW Standards of Training and Certification of Watch keepers

TBM Tool Box Meeting

VHF Very High Frequency (Radios)

2 Points of contacts

2.1 Vessel

E-mail address: atlanticdawn@hartmanshipping.com

VSAT phone: +31 20708 3635

Sat phone: +87 077316 9022

In case of malfunction of normal e-mail address, the following address will be used as back-up

Back-up: atlanticdawn@skyfile.com

2.2 Hartman Shipping 1 BV.

E-mail address: info@hartmanshipping.com

Telephone: +31 635 929 800

Address: Rijswerker 1, 8322 BN URK

2.3 Ocean 7

Name: Ocean 7 projects

E-mail address: operations@ocean7projects.com

OCEAN7 Projects Hamburg GmbH.

- as agents to Owners -

Gasstrasse 4B | Halle K 5 | 22761 Hamburg | Germany

Operations: XXX

Direct: XXX

Mobile: XXX

E-mail: XXX

Web: www.ocean7projects.com



2.4 Client contacts

Daily Positions updates to be sent to:

operations@ocean7projects.com

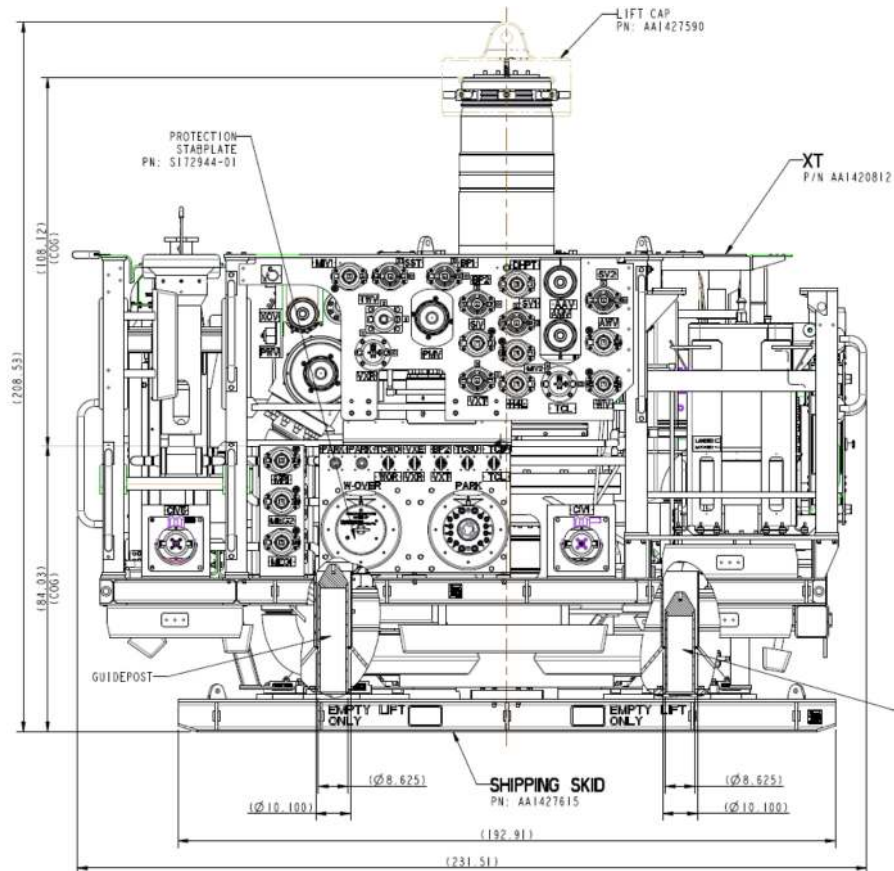
3 Project Details

3.1 Vessel

		Hartman Shippng 2 BV Rijswerker 1, 8322 BN Urk The Netherlands Tel. +31 20708 3635 Sat. +87 077316 9022 Email. atlanticdawn@hartmanshipping.com	
MV ATLANTIC DAWN 4400 DWT Heavy Lifter			
Registration Ships name Atlantic Dawn Call Sign P.C.U.S. IMO number 9671450 MMSI number 244790606 Owners Hartman Shipping 2 BV Port of registry Urk Flagstate The Netherlands Shipyard Shipkits Keel Laid October 2012 Date of delivery December 2013 Class notation Bureau Veritas I * HULL * MACH Gen Cargo-Heavy cargo 147kN/m2; Container Ship Unresricted Navigation * AUT - UMS		Load distribution Tanktop upper hold 16 t/m ² Tanktop lower hold 20 t/m ² Tweendeck 4 t/m ² Tweendeck each 280 mt/cover Hatchcovers 4 t/m ² Hatchcovers each 280 mt/cover Container capacity Hold capacity 124 teu Deck capacity 137 teu Total 261 teu Hatchcover/tweendecks Type of hatchcovers 11 pontoon hatches Tweendeck covers 7 removable pontoons Hold/hatches sizes Number of holds 1 Hold capacity 6796 cbm./240000cbft. Upper hold length 63,6 mtr Lower hold length 45,2 mtr Upper hold breadth 12,0 mtr. Lower hold breath 11,5 mtr. Hold height 10,55 mtr Upper hold height (low) 5,7 mtr. Lower hold height (low) 4,2 mtr. Upper hold height (mid) 3,95 mtr. Lower hold height (mid) 6,03 mtr. Upper hold height (high) 2,16 mtr Lower hold height (high) 7,82 mtr. Hold floor surface 1322 m ² /14229 ft ² Deck length 91,5 mtr. Deck Breath 16,8 mtr. Deck floor surface 1448 m ² /15586 ft ² Propulsion/Maneuvering Main Engine MAK 8M32C 4000 kW Bow thruster 300 kW Stern thruster 300 kW Rudder Semi Ballance Rudder Service speed ballast 17,0 knots Service speed loaded 16,0 knots Fuel consumption full 18mt/day (HFO 380) Fuel consumption eco 14,5mt/day (HFO 380) Note: Open Top sailing permitted IMO cargo Fitted (explosives only on deck) 3 level TD cover option <small>all details follow to be correct but no guaranty</small>	
Tonnage Displacement 7176 tonnes Deadweight 4400 tdw Open top Deadweight 3500 tdw Gross tonnage 5460 GT Net tonnage 1638 NT Block coefficient 0,688			
Ships dimensions Length over all 111,7 mtr. Length between p.p 102 mtr. Breath moulded 16,8 mtr. Summer Draft 5,94 mtr. Draft open top 5,36 mtr Depth moulded 9,3 mtr Depth Upper deck 12,7 mtr. Keel to top mast 34,0 mtr Top mast to top bridge 10 mtr.			
Cargo gear Cranes 2 X 150 mt SWL Type NMF DK11 150016/80028 Outreach/loads 150 mt / 4,5 - 16 mtr. 120 mt / 4,5 - 19 mtr. 95 mt / 4,0 - 24 mtr 80 mt / 4,0 - 28 mtr. Tandem load 300 mt SWL			
Bunker/ballast capacity Heavy fuel oil 529 m ³ Marine gas oil 64 m ³ Lubricating oil 24,36 m ³ Fresh water 35 m ³ Ballast water 3461 m ³			

3.2 Main Cargo

Main cargo consists of three constructions of 85.5 Tonnes and several smaller items. For detailed cargo description see cargo manifest. It is included in the annex 1 of this method statement.



3.3 Voyage

Loading Port: XXX

Bunkering call: XXX

Discharge port: XXX

Discharge port: XXX

Passage time: 25 Days AGW WP



4 Procedures

All procedures are predefined, but the captain always has the overriding authority and is thereby able to stop the operation and alter the plan if this improves the safety. However, if any involved personnel see a dangerous situation, he/she can stop the operation. Captain has to decide if, how and when operation will be started again.

4.1 Before cargo operation

1	Stability calculations for sea and lifting operations	Make stability calculation for lifting operation and decide to use stability pontoon or not. Stability calculation for position of the cargo during the voyage. A stowage plan has to be made.	Captain Support
2	Lashing calculations	Calculate if lashing and securing meets the standards.	Captain
3	Check equipment	Prior to the lifting operations starts all equipment has to be checked. This contains ballasting and heeling system (including emergency stops), condition and certificates of cranes, lashing and hoisting equipment.	Captain Crew
4	Check berth	The berth has to be checked for weak spots, water depth, weather forecasts and tide.	Captain crew

4.2 Loading

1	Bring ship in position for loading	The ship is brought in place and moored with sufficient and certified mooring lines. Check the placing of cargo (regarding outreach cranes).	Captain
2	Prepare vessel and hold for loading	Crew of the vessel checks the hold and deck prior to loading. Possible points that could lead to unsafe situations are solved.	Crew
3	Place stabilizer	If necessary, the stabilize pontoon has to be placed alongside the vessel.	Crew
4	Rig up the cranes	The cranes have to be rigged according the rigging plan.	Crew
5	Toolbox meeting / communication check	A toolbox meeting is held to inform all personnel about the rules, possible hazards and plan of approach. Communication check with cranes, deck personnel and shore crew.	Captain Crew
6	Inform shore crew and port authorities	Inform that vessel is ready to start loading operation, ask port authorities for permission to start loading.	Captain
7	Loading of cargo	Load cargo following the lift plan, described loading sequence and stowage plan.	Captain Crew
8	Lashing and securing	Lashing and securing of cargo, in compliance with the lashing and securing plan.	Crew
9	Evaluation	Evaluation of loading operations. Where their problems, near-misses or points of improvements	Captain Crew

4.3 During voyage

1	Send daily position	Send a daily position of the vessel according the daily position form. Ocean 7 will update point of contacts as described in chapter 2 accordingly.	Captain
2	Periodic check of lashing and securing	Lashing and securing of cargo inspection multiple times per day and night to ensure lashing is still ok.	Crew
3	Check weather forecast	Check weather forecast daily to keep in track of weather expectations and if necessary, adapt voyage planning.	Captain

4.4 Before discharge operation

1	Stability calculation	Make stability calculation for sea condition and during lifting operations. Make decision for use of stability pontoon.	Captain
2	Check landing place cargo	Check if landing place for cargo is in reach of cranes and look if landing place is strong enough.	Captain Crew
3	Check equipment	Prior to the lifting operations starts all equipment has to be checked. This contains ballasting system (including emergency stops), condition and certificates of cranes, lashing and hoisting equipment.	Crew

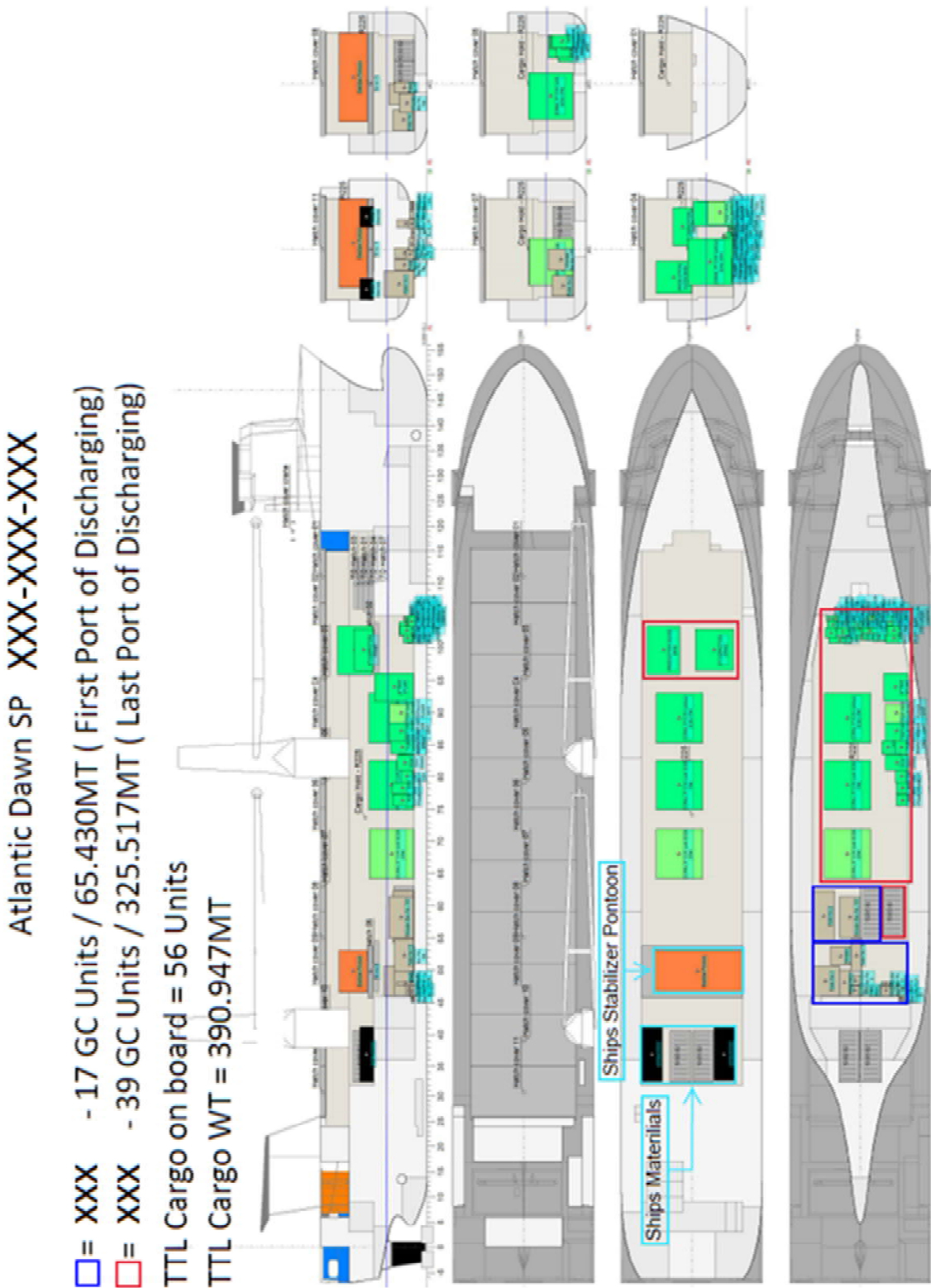
4.5 Discharging

1	Bring ship in position for discharging	The ship is brought in place and moored with sufficient and certified mooring lines. Check the placing of cargo (regarding outreach cranes).	Captain
2	Prepare vessel and hold for discharging	Crew of the vessel checks the hold and deck prior to loading. Possible points that could lead to unsafe situations are solved.	Crew
3	Place stabilizer	If necessary, the stabilize pontoon has to be placed alongside the vessel.	Crew
4	Rig up the cranes	The cranes of the mv Atlantic Dawn has to be rigged according the rigging plan.	Crew
5	Toolbox meeting / communication check	A toolbox meeting is held to inform all personnel about the rules, possible hazards and plan of approach. Communication check with cranes, deck personnel and shore crew.	Captain Crew
6	Inform shore crew and port authorities	Inform that vessel is ready to start operation, ask port authorities for permission to start unloading.	Captain
7	Discharge cargo	Unload cargo following the lift plan, described unloading sequence and stowage plan.	Captain Crew

5 Cargo Plan

5.1 Stow Plan

For stowage of the cargo, dunnage like timber and rubber is used where necessary, to prevent damage to painted surfaces and to provide a better friction coefficient. Full stowage plan can be found in annex 2.



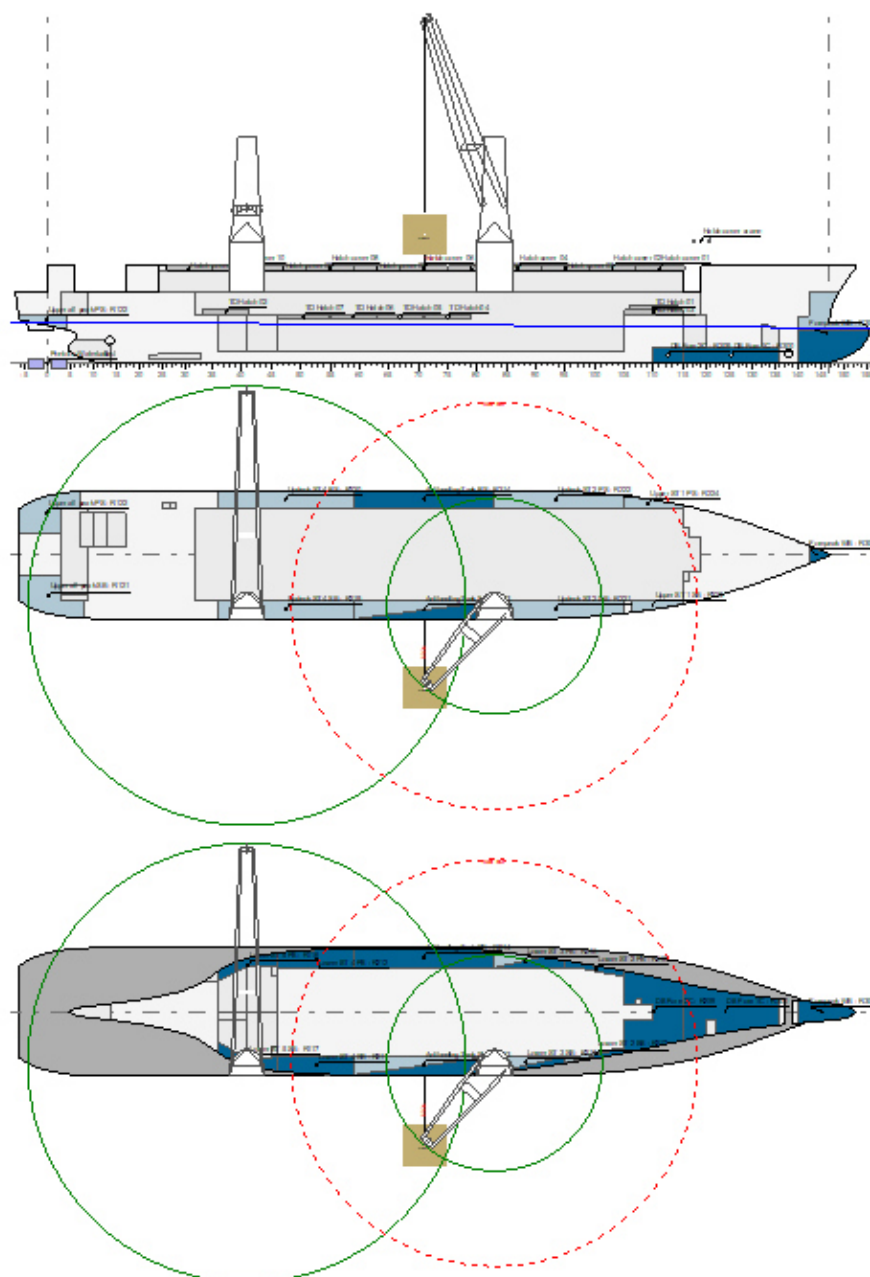
5.2 Lift plan

5.2.1 Lift plans

Cargo will be lifted with Crane no. 1 from shore to the vessel (vice versa on discharging).
Measurements are an estimation. Full plans available in annex 3.

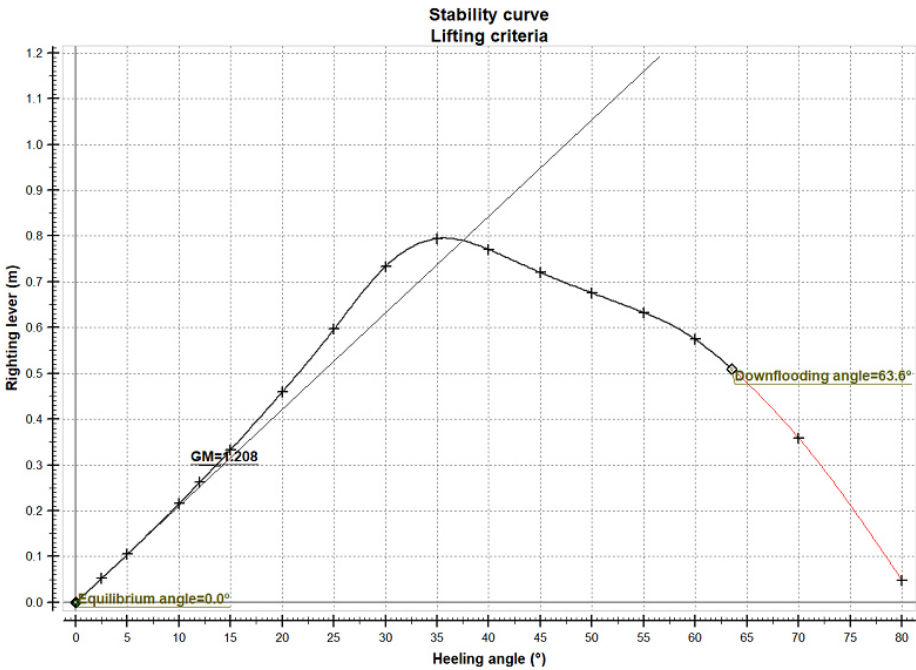
LIFTING 85.5T XT

Atlantic Dawn



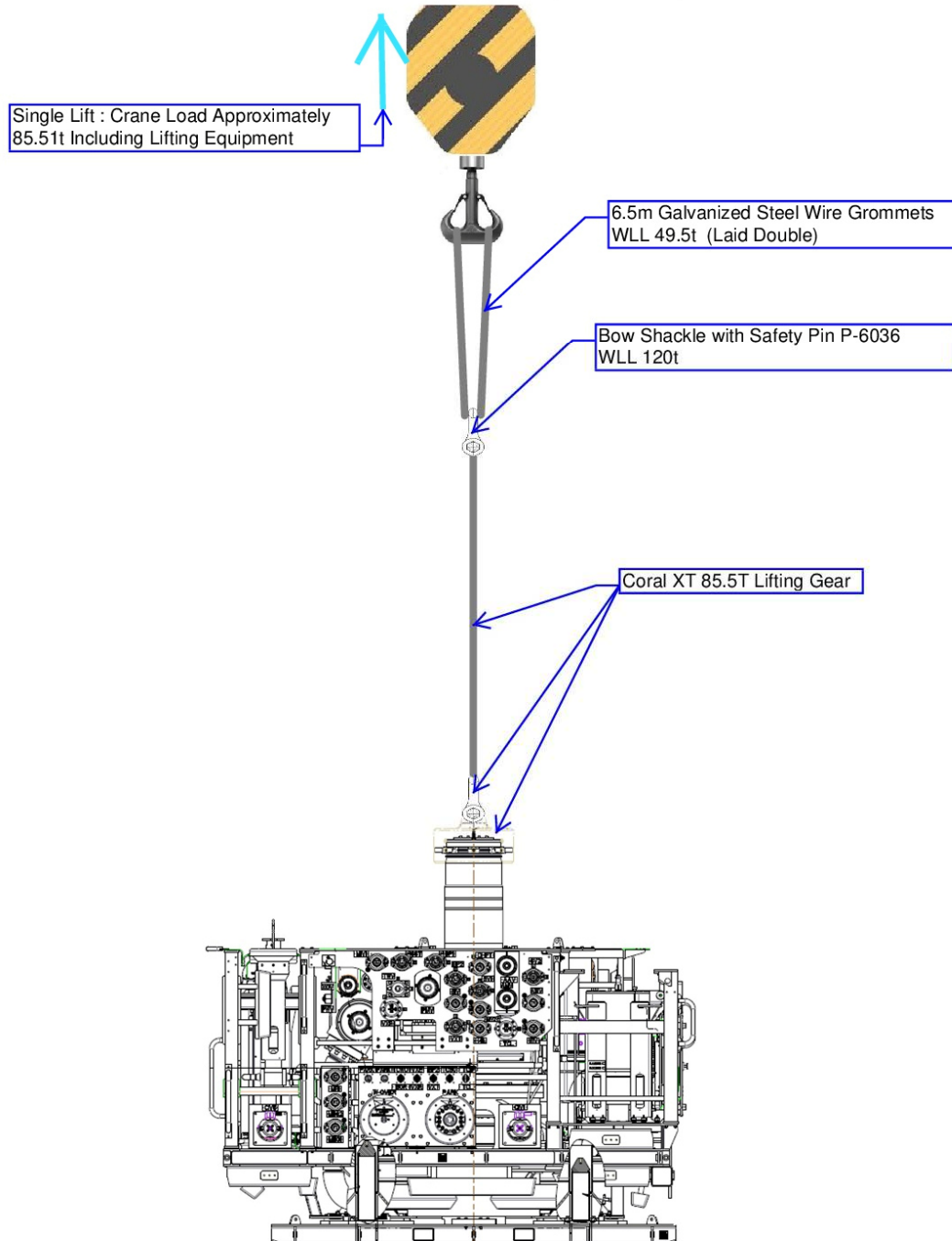
Stability

Atlantic Dawn



5.2.2 Lifting equipment

Coral XT 85.5t Lifting Plan (Front View)



5.3 Lashing & Securing

Lashing calculations can be found in annex 3.

Chain Lashings						
Lashing #	MSL	CS	α	β	$CS \cdot F_y$	$CS \cdot F_x$
1	106	79	37	30	68.47	45.54
2	106	79	37	0	76.79	13.98
3	106	79	37	0	76.79	13.98
4	106	79	37	0	76.79	13.98
5	106	79	37	30	68.47	45.54
6	106	79	40	30	67.53	45.54
7	106	79	40	0	75.38	14.92
8	106	79	40	0	75.38	14.92
9	106	79	40	0	75.38	14.92
10	106	79	40	30	67.53	45.54

Plate Stoppers			
No. of clips PS/SB	2	No. of clips Fwd/Aft	1
Length Top	300mm	Length Bottom	300mm
Dog Plate Thickness	20mm	Dog Plate Height	150mm
Height of Cut	-	Weld Thickness	8mm

Final Calculations				
	Force (kN)	Securing (kN)	Status	Out with limits
Transverse balance of forces (PS)	599.60	611.00	OK	-
Transverse balance of forces (SB)	599.60	617.00	OK	-
Transverse balance of forces (FWD)	150.90	218.00	OK	YES
Transverse balance of forces (AFT)	150.90	217.00	OK	YES
Overtuning forces PS	1388.08	6641.03	OK	YES
Overtuning forces SB	1388.08	6613.85	OK	YES
Overtuning forces fwd/aft	349.35	3790.68	OK	YES
	Total Stress on Weld	Allowable Weld Stress	Status	Out with limits
Stoppers STBD/PORT	95.16	144.00	OK	YES
Stoppers FWD/AFT	43.36	144.00	OK	YES

5.4 Stability calculations

During lifting the stability details are within safe margins. Full stability report can be found in annex 5.

Evaluation of criteria				
Lifting criteria				
Lifting operations				
Description	Attained value	Criterion	Required value	Complies
GM	1.208 (m)	>=	1.000 (m)	YES
Heeling angle	0.0 (Degr.)	<=	3.0 (Degr.)	YES
ABIS additional lifting criterion	7102 (t*m)	>=	3479 (t*m)	YES
Safety margin	10.0 %			

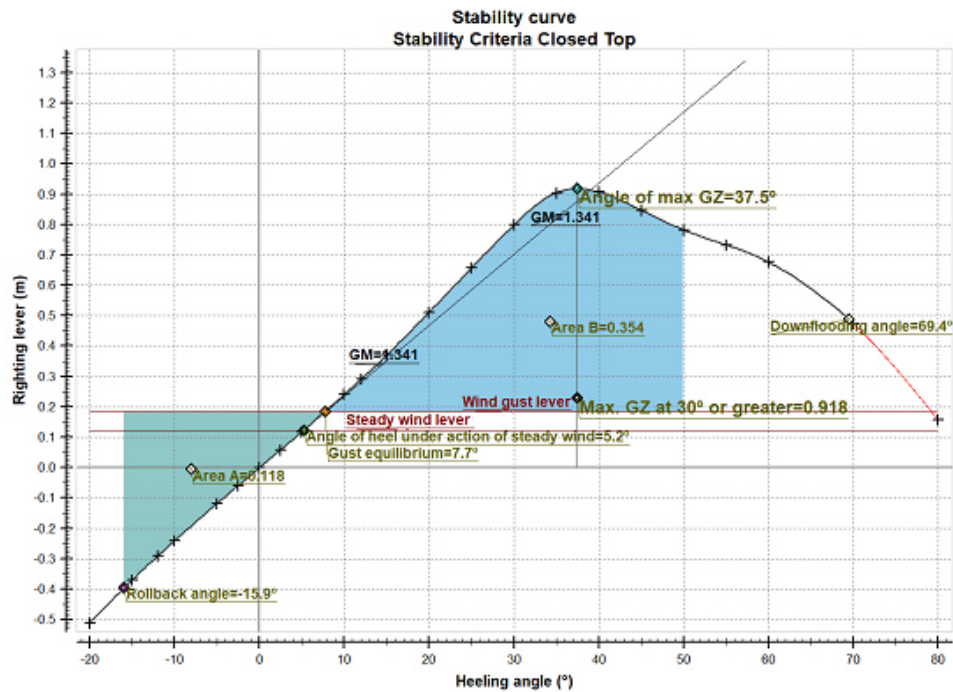
During sea passage all safety factors are within the safety margins. Full reports

Evaluation of criteria				
Stability Criteria Closed Top				
International Code on Intact Stability (2008), Part A, §2.2 - §2.3				
Description	Attained value	Criterion	Required value	Complies
Area 0° - 30°	0.2004 (mrad)	>=	0.0550 (mrad)	YES
Area 0° - 40°	0.3551 (mrad)	>=	0.0900 (mrad)	YES
Area 30° - 40°	0.1547 (mrad)	>=	0.0300 (mrad)	YES
Max. GZ at 30° or greater	0.918 (m)	>=	0.200 (m)	YES
Lower angle	30.0 (Degr.)			
Upper angle	90.0 (Degr.)			
Angle of max GZ	37.5 (Degr.)	>=	25.0 (Degr.)	YES
Initial metacentric height	1.341 (m)	>=	0.150 (m)	YES
Severe wind and rolling criterion (weather criterion)				YES
Wind silhouette:	Silhouette no deckload			
Wind pressure	51.4 (kg/m²)			
Wind area	1300.41 (m²)			
Steady wind lever	0.123 (m)			
Deck immersion angle	30.50 (Degr.)			
Wind gust lever	0.185 (m)			
Ratio of areaA/areaB	0.332	<=	1.000	YES
Maximum allowed static heeling angle	5.2 (Degr.)	<=	16.0 (Degr.)	YES
Max. allowed ratio static angle/deck immersion angle	0.171	<=	0.800	YES
Maximum draught	4.601 (m)	<=	5.952 (m)	YES
Minimum GM damaged Closed Top	1.341 (m)	>=	1.265 (m)	YES
Max VCG	6.724 (m)			
Minimum draught forward	4.432 (m)	>=	2.612 (m)	YES
Stability Criteria Closed Top Container				
International Code on Intact Stability (2008), Part A, §2.2 - §2.3				
Description	Attained value	Criterion	Required value	Complies
Area 0° - 30°	0.2004 (mrad)	>=	0.0550 (mrad)	YES
Area 0° - 40°	0.3551 (mrad)	>=	0.0900 (mrad)	YES
Area 30° - 40°	0.1547 (mrad)	>=	0.0300 (mrad)	YES
Max. GZ at 30° or greater	0.918 (m)	>=	0.200 (m)	YES
Lower angle	30.0 (Degr.)			
Upper angle	90.0 (Degr.)			
Angle of max GZ	37.5 (Degr.)	>=	25.0 (Degr.)	YES
Initial metacentric height	1.341 (m)	>=	0.200 (m)	YES
Severe wind and rolling criterion (weather criterion)				YES
Wind silhouette:	Silhouette no deckload			
Wind pressure	51.4 (kg/m²)			
Wind area	1300.41 (m²)			
Steady wind lever	0.123 (m)			
Deck immersion angle	30.50 (Degr.)			
Wind gust lever	0.185 (m)			
Ratio of areaA/areaB	0.332	<=	1.000	YES
Maximum allowed static heeling angle	5.2 (Degr.)	<=	16.0 (Degr.)	YES

Evaluation of criteria

Max allowed ratio static angle/deck immersion angle	0.171	<=	0.800	YES
Maximum draught	4.601 (m)	<=	5.952 (m)	YES
Minimum GM damaged Closed Top	1.341 (m)	>=	1.265 (m)	YES
Max VCG	6.724 (m)			
Minimum draught forward	4.432 (m)	>=	2.612 (m)	YES

The condition complies with the stability criteria



6 HSE guidelines

6.1 Introduction

A qualified person means a person, based on his certification, authority, knowledge and experience, capable of being responsible for a given cargo operational task and/or for a working area.

A person in charge means a person appointed by a qualified person for heading a given task under the supervision of a qualified person.

A working area means any area in which cargo operations are carried out on board a vessel and includes adjacent areas in which cargo gear is being handled or prepared.

Hot work includes, but is not limited to, gouging, burning, welding, preheating, brazing, drilling, grinding, chipping or any other work where flames are used or sparks are produced.

A near miss is an event not causing harm, but has the potential to cause injury or ill health.

An incident is an event that gave rise to an accident or had the potential to lead to an accident.

An accident is an undesired event giving rise to death, ill health, injury, damage or loss.

A corrective action is an action designed to correct an undesirable procedure.

A control measure is a measure designed to prevent or reduce the probability of occurrence of an undesirable incident or accident.

6.2 Individual responsibility

HSE matters and avoidance of incidents and accidents are treated with utmost importance at Hartman Shipping. HS strives to ensure that all employees are given a healthy and safe working environment. However, without feedback from the employees, the HSE policies will turn obsolete. Therefore, to ensure continuous success with HSE, all personnel, from management to novice, are requested to be supportive and develop a thorough understanding of the HSE regulations and procedures pertaining their respective jobs.

Subcontractors and clients undertaking work on board or on site will have to comply with Hartman Shipping HSE policies and guidelines and instruct their appointed representatives on board/on site accordingly.

Operations in the working areas

Every employer shall arrange that each task be carried out in a manner not endangering the safety or health of any persons involved. He shall adopt and carry out reasonable procedures and techniques designed or intended to prevent or reduce the risk of injury. A qualified person shall always be in overall charge in any working area and make periodic inspections of the area and the items being used in the area.

No hot work is allowed without proper precaution against burning, grinding and other types of work, which create sparks or open fire. A fire watch has to be arranged during and after completion of the job, and fire extinguishers and blankets have to be in place at all times close to the hot work area.

No person shall use any machinery or equipment for any purpose other than the purpose for which it is intended. No person shall use any machinery or equipment that has been re-assembled after being dismantled, completely or partly, until it has been examined by a qualified person and found in order.

Manual lifting/carrying of weights that can jeopardize the health or safety of a person shall be avoided.

No person shall handle, except by mechanical means, any material or object, where shape, size, toxicity or other characteristics of it is likely to jeopardize his health or safety.

The person in charge of the cargo working area must ensure that there is sufficient lighting. Every person in charge of a dark working area or a working area with dimly lighted conditions must be provided with portable lights. When portable or temporary lights are in use, supports and cables are to be arranged in order to prevent persons from tripping and clear of running gear and other moving parts.

Working areas are to be kept clean and tidy (no litter, grease, oil etc.). Gear or equipment stowed in such areas are to be sufficiently secured and ropes and wires are to be coiled up when not in use.

Areas where a risk of falling exists must be barriered to highlight this hazard.

Wherever hazardous or obstructions exist, safety signs are to be posted. Preferably, safety signs shall be pictorial and comply with international and flag state regulations.

Unsafe conditions, incident and accidents

Anybody observing an unsafe condition in a working area must report immediately to the person in charge of this working area. The person in charge shall then report to the qualified person and ensure that the unsafe condition(s) are effectively removed. In an emergency, any person may immediately take whatever measures are necessary to prevent injuries and loss of human lives.

Any person who becomes aware of an accident or an injury to a person in a working area shall report immediately to the person in charge of this area.

Electrical safety precautions

Defective electrical equipment used for cargo operations must be switched off at the main switchboard and a poster must be attached to the electrical equipment and by the control switch indicating that the equipment is defective or out of order.

Where necessary, electrical equipment used for cargo operations must be grounded and all electrical connections properly insulated or covered to protect persons from electrical shock. Grounded electrical equipment and appliances shall be used only when connected into a matching grounded electrical outlet.

Power supply cables for portable electrical equipment must be placed clear of areas used for vehicles unless adequate protection for the cables is provided.

6.3 Personnel protective equipment matrix

On board of the ship the following protective equipment are present;

- 30 Sets of Gloves
- 5 Inflatable Life Jackets
- 3 Climbing harnesses
- 25 Safety Goggles
- 12 Safety Goggles Big
- 12 Helmets
- 6 Peltor Ear protection
- 100 Ear plugs
- 15 High Visibility Jackets

On board of the ship the following PPE are required and have to be worn by all personnel



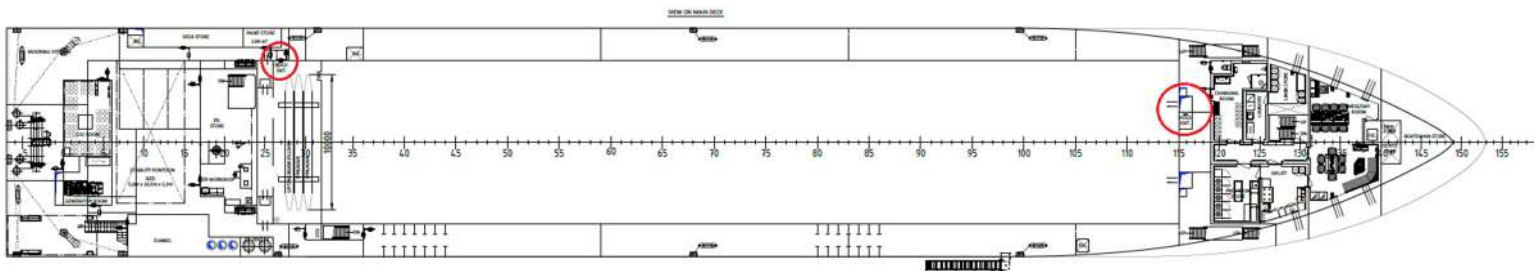
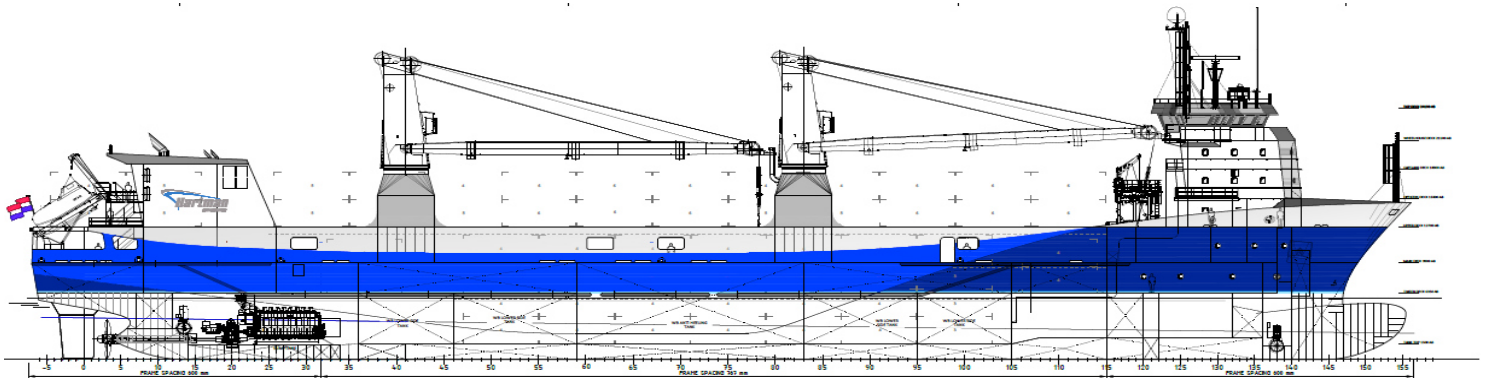
6.4 Emergency response

In case of an emergency while loading or unloading of the cargo, the crew of the ship will follow the emergency procedure.

1. Secure the site
2. Raise alarm
3. Bring First aider to injured person
4. Contact emergency service if required
5. coordinate and assist evacuation process
6. contact Hartman Shipping Support

6.5 Safety plan

The stairs that can be used to from the cargo hold are located at the red circles. In case of evacuation the personnel on the vessel has to evacuate through these exits. The full safety plan is available on board of the mv Atlantic Dawn.



6.6 Risk assessment

A risk assessment is a careful examination of what in the nature of operations could cause harm so that decisions can be made as to whether enough precautions have been taken or whether more should be done to prevent harm. The aim is to minimize accidents and incidents.

The risk assessment should firstly establish the hazards that are present and then identify the significant risks arising out of the work activity. The assessment should take into account any existing precautions to control the risk - such as permits to work, restricted access, use of warning signs, agreed procedures and personal protective equipment. Please refer to Appendix A and B in this booklet.

The types of question when carrying out a risk assessment normally include the following:

What can go wrong? An identification of the hazards and accident scenarios, together with potential causes and outcomes.

How serious and how likely? An evaluation of risk factors. Determine the probability and the consequences.


What are the control measures? An identification of control measures to reduce the identified risks.

What is the effort and how much better would it be? A determination of the benefit and effectiveness of each risk control option.

What actions should be taken? An identification of the appropriate course of action to deliver a safe activity based on the hazards, their associated risks and the effectiveness of alternative risk control options.

Risk assessment matrix

When working with risk assessments, we are making use of this matrix:

 Detailed Risk Assessment											
SMS Amsys				Assessment				Page 1 of 1			
Annex 3 Form C								Issue Date 01 Nov 201			
Project: CARGO OPERATION KALUNDBORG & PETERHEAD				Assessment date: 24/07/2019							
Operation	Hazard	Cause of hazard	Existing control measures	Likelihood	Effect	Risk	Additional hazard found	Additional control measures	Likelihood	Effect	Risk
1 Lifting Operation	cargo can fall to person	passing under suspended load	designate off limit area, discuss at toolbox meeting	2	4	8 ●		don't allow any person not directly involve in lifting to enter off limit area	2	4	8 ●
2 Working at heights	falling down on deck or at shore during hooking the cargo & lashing materials	not using safety harness & climbing on the cargo	use safety harness & line & suitable ladder	2	2	4 ●					0 ●
3 open cargo hold	falling down on the cargo hold from flush deck either port or starboard side	person passing in an open cargo hold without railing	install rails on the flush deck where hatch cover is open, designate off limit area	2	4	8 ●		don't allow any person not directly involve in lifting to enter off limit area	2	4	8 ●
4 hoisting	falling of load	damaged hoisting equipment	to be checked for any damage at each use	2	2	4 ●					0 ●
5 Hot work	can cause fire	combustible material easily to ignite fire	follow ship standard procedure for hot work, standby FFE and fire watch should be posted at all times.	2	3	6 ●		evaluate the area and eliminate hazard that can be easily ignite to create fire.	2	3	6 ●
6 Working PPE	injury to personnel	improper used and incomplete PPE	safety officer should be ensure that all crew or person involve on the operation should have enough and complete PPE	2	3	6 ●		crew or person that does not have complete PPE should be inform the safety officer immediately			0 ●
7 Passageways	can slip, falling object and accidentally fall on heights	obstructed area	all passageway should be clear from any obstructions	2	2	4 ●					0 ●
8						0 ●					0 ●
9						0 ●					0 ●
#						0 ●					0 ●

The way to use the risk assessment matrix

1. Identify the hazard. 2. Select the Likelihood (L) in relation to the hazard. 3. Select the Effect (E) in relation to the hazard. 4. Multiply L and E to determine the Risk factor.

The target after control measures have been implemented is always the green area.

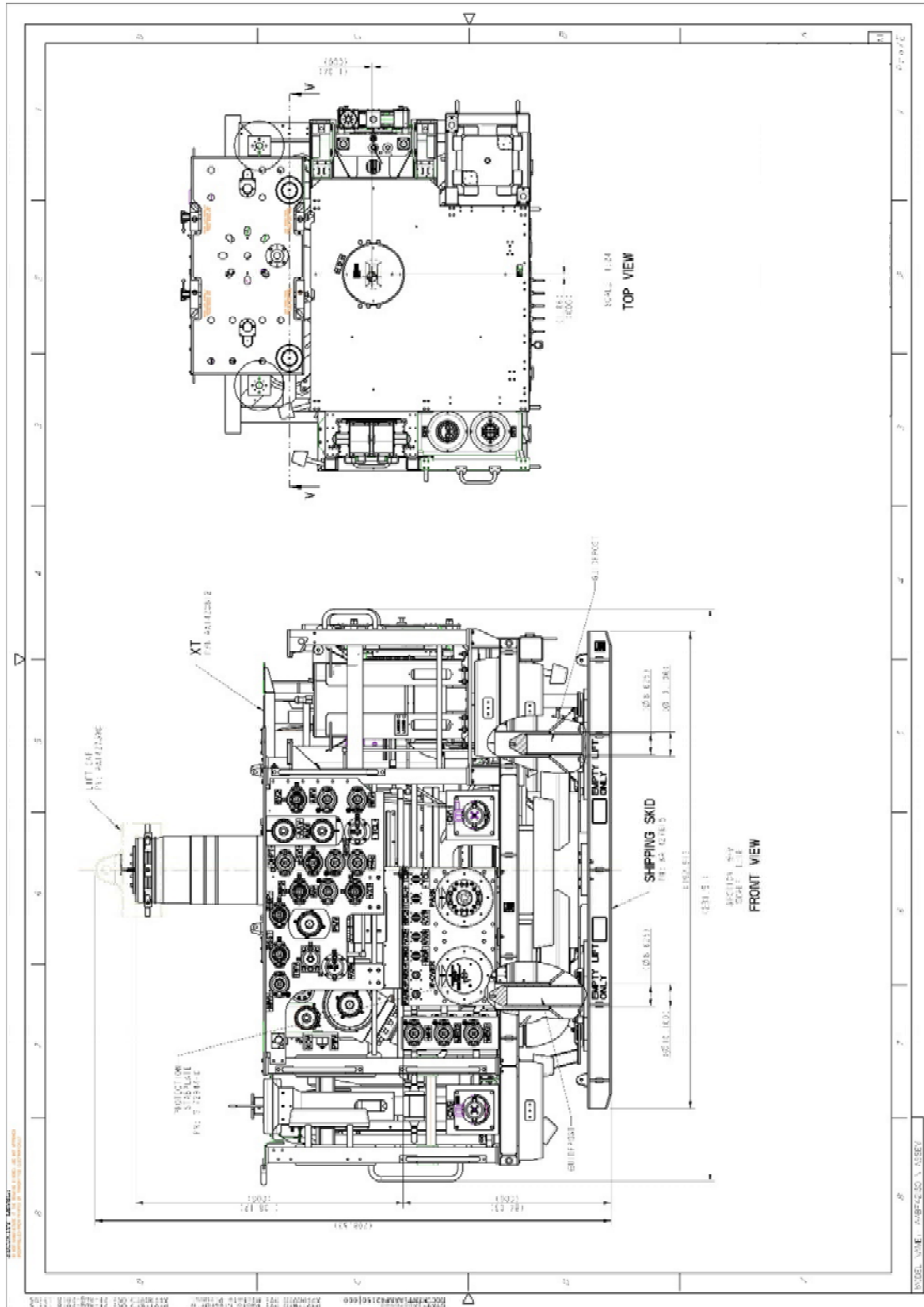
6.7 Corrective actions

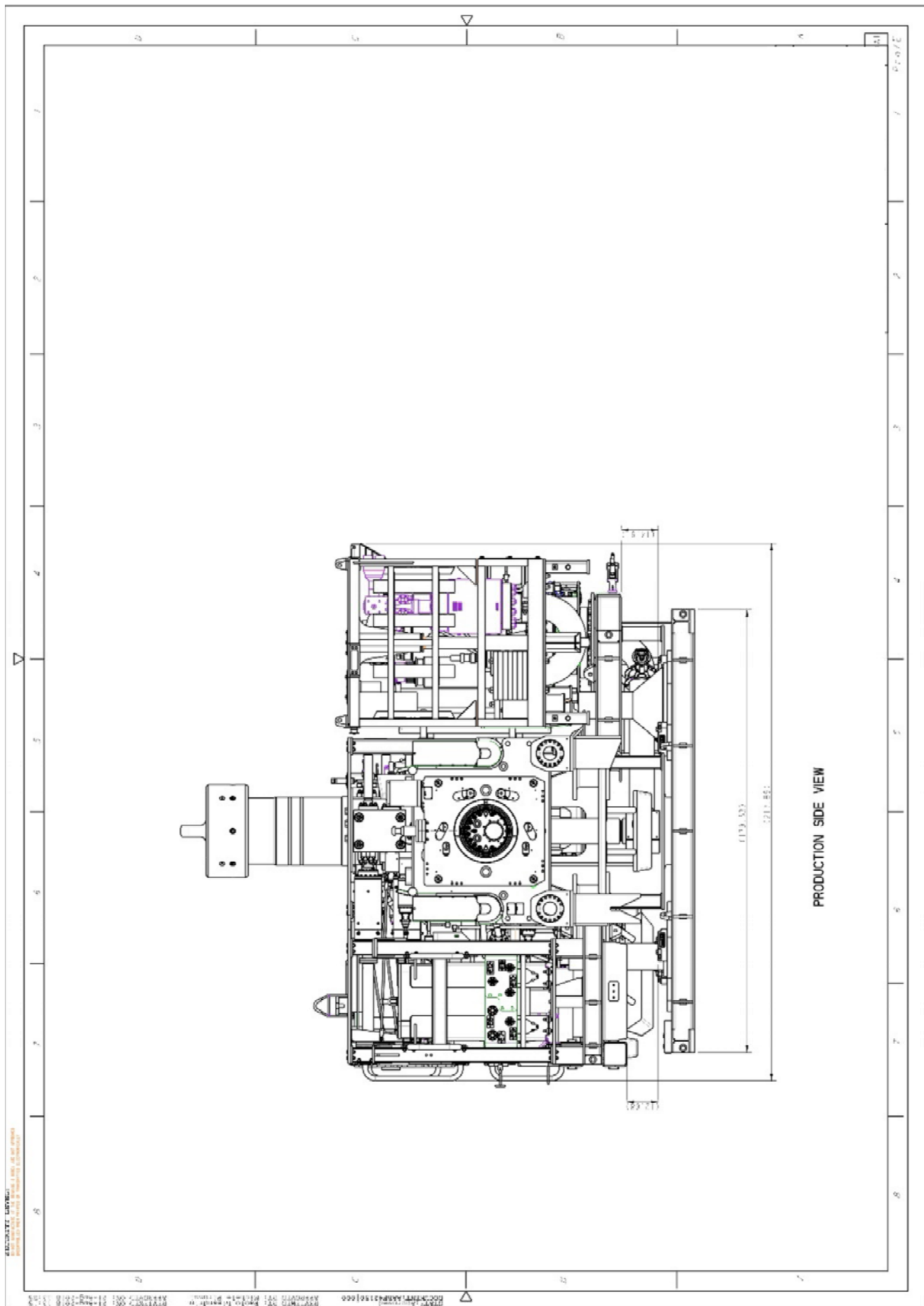
In the event of an incident or accident, an SJA must be carried out to remove and minimize risks. Actions contained in the SJA must be recorded on Form C1 in order to monitor and learn from the effectiveness of the measures that are put in place to control the risks in the working area.

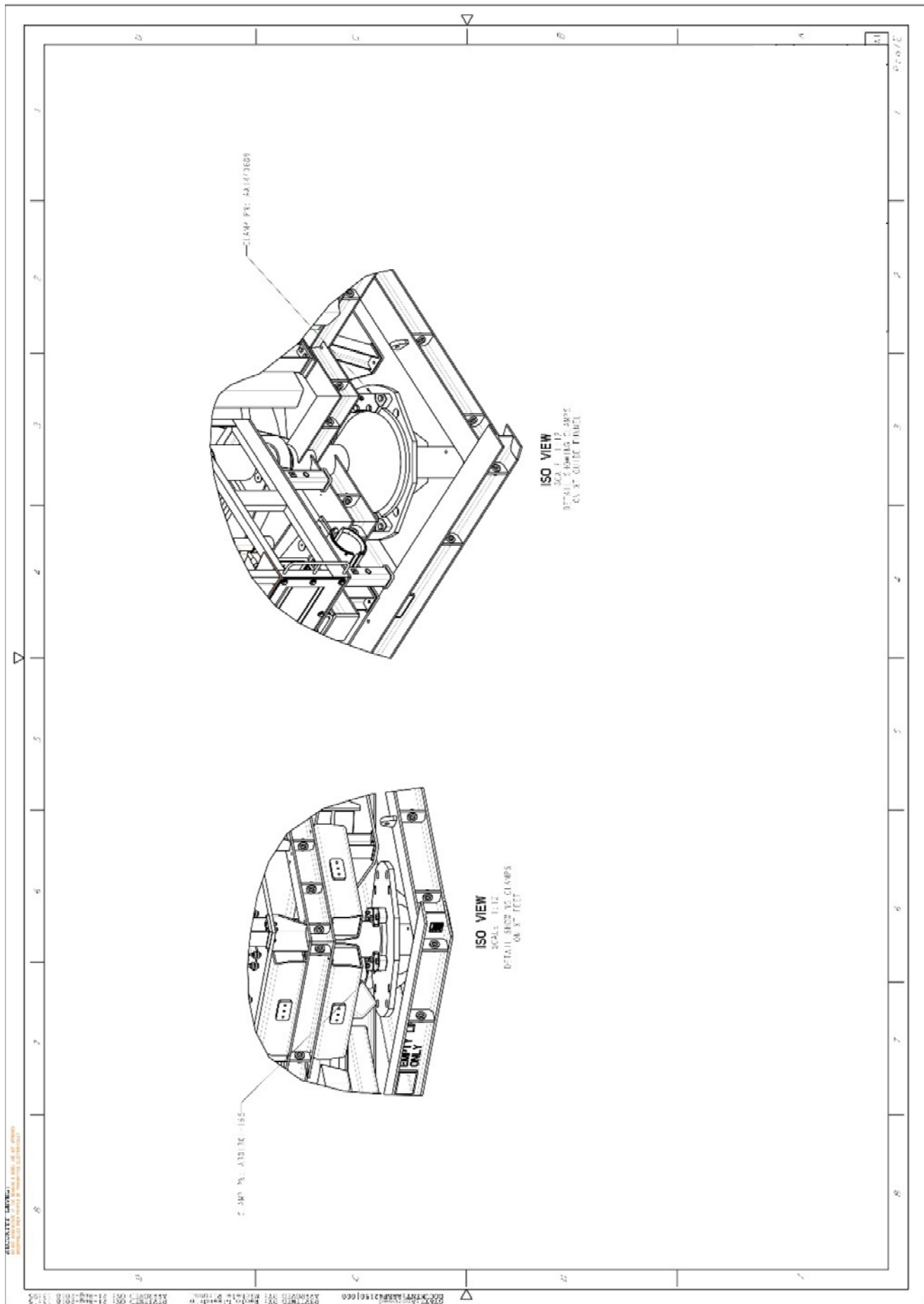
Investigations will help you to:

- identify why existing control measures failed and what improvements or additional measures are needed
- plan to prevent the incident from happening again
- point to areas where your risk assessment needs reviewing
- improve risk control in your workplace in the future

Reporting incidents should not stop you from carrying out your own investigation to ensure risks in your workplace are controlled.







Annex 2

Stowage plan

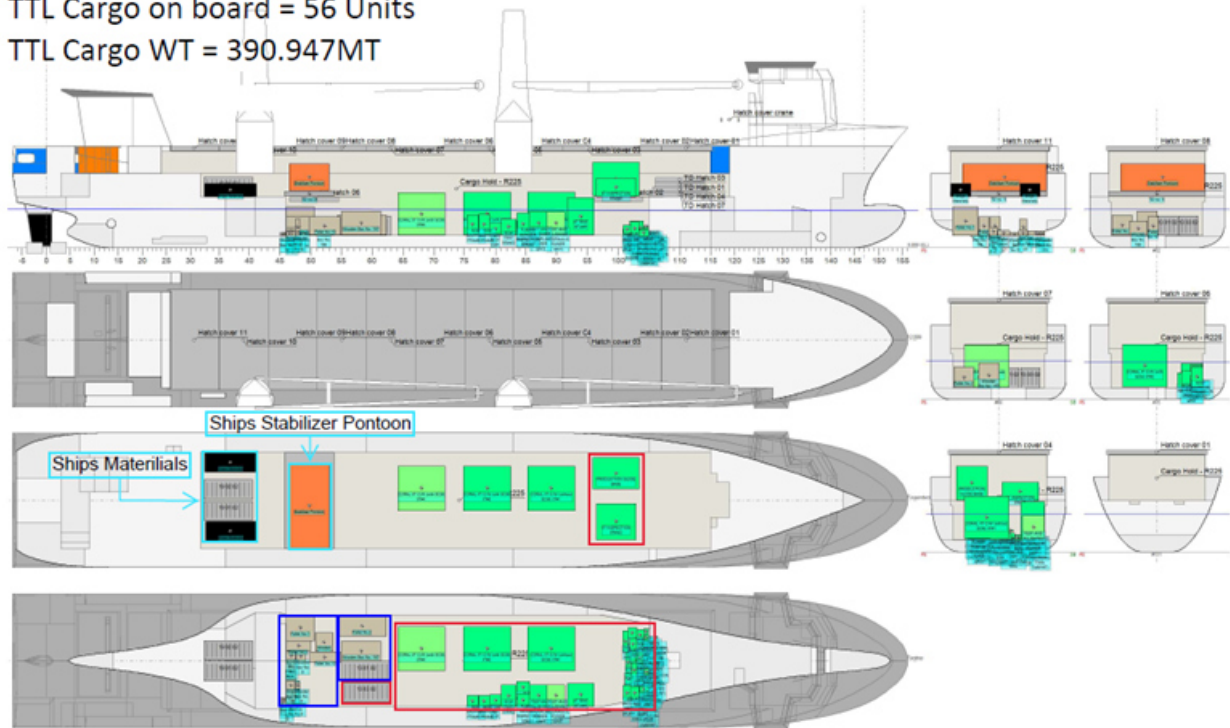
Atlantic Dawn SP XXX-XXX-XXX

☐= XXX - 17 GC Units / 65.430MT (First Port of Discharging)

☐= XXX - 39 GC Units / 325.517MT (Last Port of Discharging)

TTL Cargo on board = 56 Units

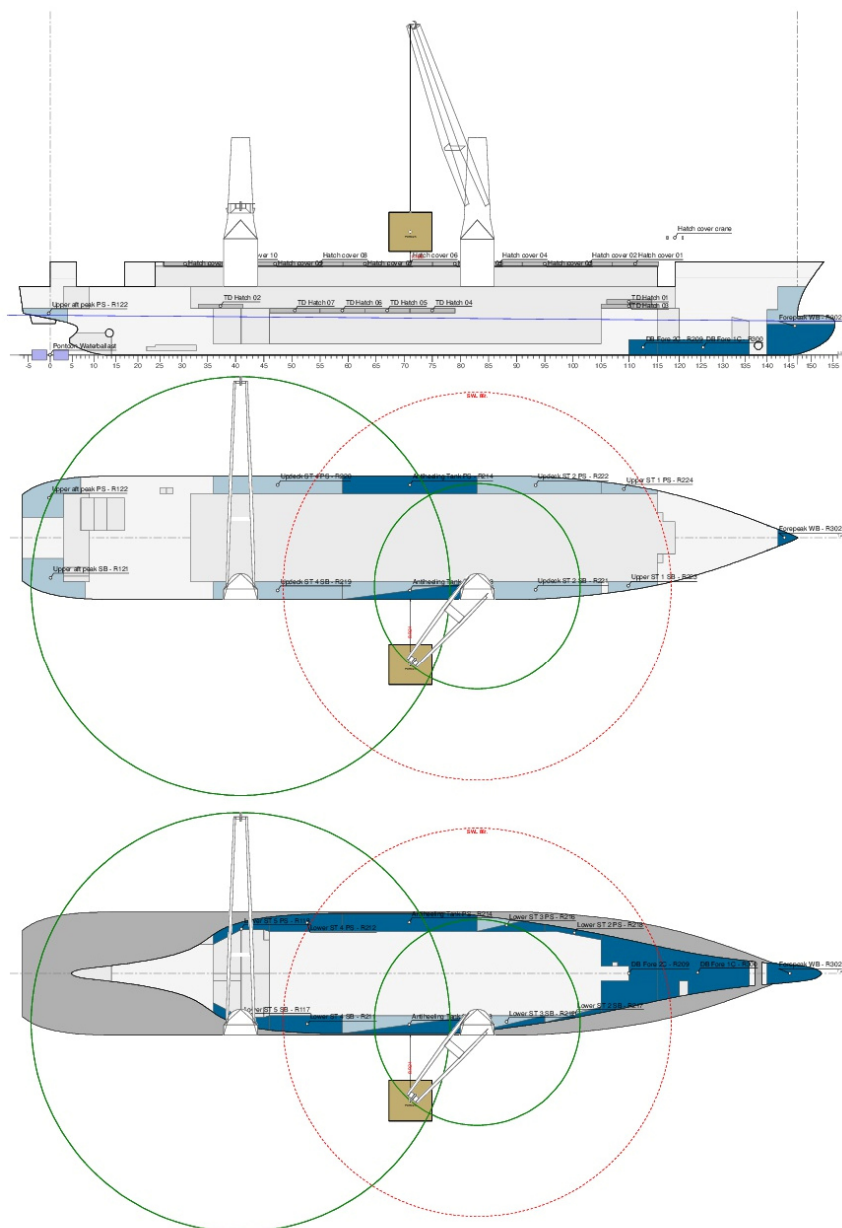
TTL Cargo WT = 390.947MT



General cargo

PDR023	85.50	63.000	1.500 (PS)	4.274	0.0
PDR024	85.50	55.000	1.500 (PS)	4.274	0.0
PDR025	85.50	46.871	1.500 (PS)	4.274	0.0
XT TEST STUMP	10.85	54.359	-4.236 (SB)	3.936	0.0
EXTERNAL TREE CAP	9.00	59.672	-4.410 (SB)	2.785	0.0
XT INSPECTION STAND	8.10	71.128	-1.495 (SB)	2.658	0.0
SCM TEST STAND/SCM LIFTING ADAPTER/SCM BOX SPANNER	2.80	62.076	-4.284 (SB)	2.605	0.0
TREE TEST CAP	4.75	66.321	-3.483 (SB)	2.335	0.0
SCM INSPECTION STAND	0.40	64.016	-3.196 (SB)	2.474	0.0
TUBING HANGER INSPECTION STAND	1.90	64.016	-4.842 (SB)	2.964	0.0
580 HCCS PRESSURE CAP	0.48	69.095	-5.190 (SB)	1.719	0.0
DUMMY TUBING HANGER	1.85	66.359	-5.272 (SB)	1.951	0.0
WEAR BUSHING RUNNING RETRIEVAL TOOL (WBRRT)	0.57	69.095	-4.580 (SB)	1.813	0.0
UNIVERSAL RUNNING TOOL (URT)	2.23	66.388	-4.583 (SB)	1.872	0.0
UNIVERSAL RUNNING TOOL (URT) HTT	0.35	74.151	-4.415 (SB)	1.792	0.0
CLASS 4 TORQUE TOOL	0.10	70.326	-4.468 (SB)	1.746	0.0
CLASS 4 TORQUE TOOL CALIBRATION UNIT	0.10	70.326	-5.110 (SB)	1.746	0.0
CLASS 6 TORQUE TOOL ISO 13628-8 TO OPERATE HUB CLAMP FOR TESTING	0.15	71.241	-4.919 (SB)	1.746	0.0
CLASS 6 TORQUE TOOL CALIBRATION UNIT	0.25	72.234	-4.717 (SB)	1.746	0.0
4 1/2 LIFTING SUB/6 5/8 LIFTING SUB	0.16	73.164	-4.567 (SB)	1.746	0.0
TEST AND FLUSHING HYDRAULIC POWER UNIT	4.50	57.237	-4.347 (SB)	2.632	0.0
Totals for General cargo	305.02	56.113	0.650 (PS)	4.046	

Lifting plan

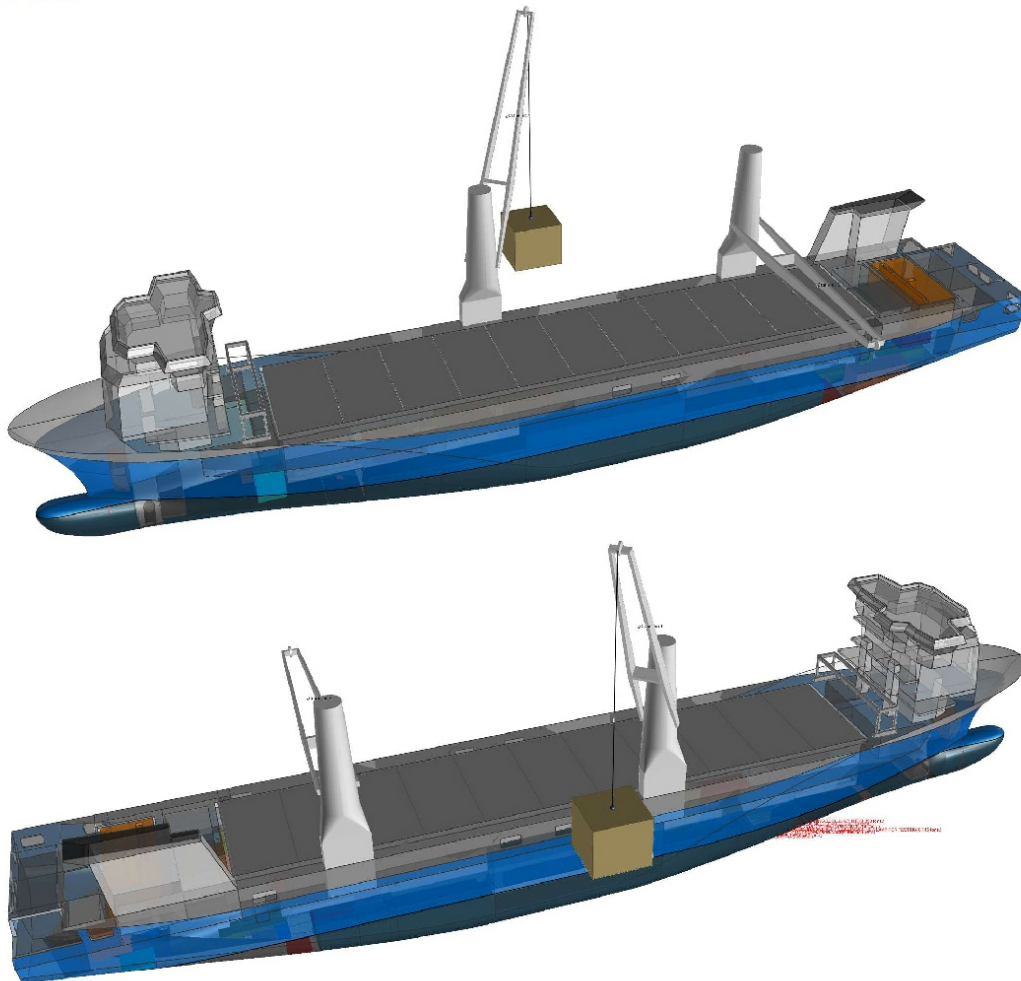


LIFTING 85.5T XT

Atlantic Dawn



3D View



DELFTload loading computer software

02/08/2019 18:46:18 DELFTload 7.05

3

LIFTING 85.5T XT

Atlantic Dawn



Stability

Evaluation of criteria

Lifting criteria

Lifting operations

Description	Attained value	Criterion	Required value	Complies
GM	1.208 (m)	>=	1.000 (m)	YES
Heeling angle	0.0 (Degr.)	<=	3.0 (Degr.)	YES
ABIS additional lifting criterion	7102 (t*m)	>=	3479 (t*m)	YES
Safety margin	10.0 %			

Stability Criteria Closed Top Container

International Code on Intact Stability (2008), Part A, §2.2 - §2.3

Description	Attained value	Criterion	Required value	Complies
Area 0° - 30°	0.1813 (mrad)	>=	0.0550 (mrad)	YES
Area 0° - 40°	0.3174 (mrad)	>=	0.0900 (mrad)	YES
Area 30° - 40°	0.1361 (mrad)	>=	0.0300 (mrad)	YES
Max. GZ at 30° or greater	0.795 (m)	>=	0.200 (m)	YES
Lower angle	30.0 (Degr.)			
Upper angle	90.0 (Degr.)			
Angle of max GZ	35.6 (Degr.)	>=	25.0 (Degr.)	YES
Initial metacentric height	1.208 (m)	>=	0.200 (m)	YES
Severe wind and rolling criterion (weather criterion)				YES
Wind silhouette:	Silhouette no deckload			
Wind pressure	51.4 (kg/m²)			
Wind area	1282.44 (m²)			
Steady wind lever	0.109 (m)			
Deck immersion angle	28.32 (Degr.)			
Wind gust lever	0.163 (m)			
Ratio of areaA/areaB	0.337	<=	1.000	YES
Maximum allowed static heeling angle	5.2 (Degr.)	<=	16.0 (Degr.)	YES
Max allowed ratio static angle/deck immersion angle	0.182	<=	0.800	YES
Maximum draught	5.056 (m)	<=	5.952 (m)	YES
Minimum GM damaged Closed Top	1.208 (m)	>=	1.167 (m)	YES
Max VCG'	6.790 (m)			
Minimum draught forward	4.670 (m)	>=	2.612 (m)	YES

The condition complies with the stability criteria

Coral XT 85.5t Lifting Plan (Front View)

