Annex A

Watch Periodic Machinery Log for 27, 28 and 29 June 2008

A

MEDIUM SPEED DIESEL ENGINE			WATCHKEEPING OR PERIODIC PROPULSION PLANT LOG				M.V. MOONDANCE						DATE 27.06.08	
WATCH			0000	0004	0004	0008	0008	NOON	NOON	1600	1600	2000	2000	2400
ENGINE			P	S			P	S						
RUN HRS														
COUNTER														
R.P.M.			600	600			600	600						
LOAD INDICATOR														
SPEED SETTING														
CPP SETTING			20.0	21.5			22.0	22.0						
~~CPP SERVO PRESS~~		T	66	57			64	55						
SCAV AIR	kg/cm³ / °C		0.75 / 37	0.85 / 43			1.05 / 40	1.05 / 40						
E.R. AIR TEMP °C														
AIR COOLER	PRESS DROP	1												
		2												
TURBOCHARGERS	REVS. X 1000	1	15.0	15.0			17.0	15.7						
		2												
	GAS IN/OUT	1	~~390~~	~~370~~			~~350~~	~~370~~						
		2	~~395~~	~~380~~			~~350~~	~~380~~						
	L.O. PRESS	1												
		2												
EXHAUST TEMPS °C	1 / 9		350 / 350	375			370 / 280	380						
	2 / 10		355 / 360	375 / 365			385 / 300	385 / 370						
	3 / 11		355 / 355	365 / 360			375 / 350	380 / 310						
	4 / 12		350 / 355	365 / 370			375 / 360	330 / 380						
	5 / 13		350 / 350	365 / 365			380 / 310	380 / 370						
	6 / 14		335 / 360	360 / 325			380 / 280	375 / 310						
	7 / 15		345 / 280	340 / 335			380 / 300	330 / 360						
	8 / 16		355 / 385	380 / 320			385 / 400	330 / 300						
J.W. HEADER TK			700				700							
SUMPS CMS			2.9	2.8			2.9	2.8						
PRESSURE Kg/Cm²	OIL	BRGS	3.2	3.3			3.2	3.2						
		FILTER DP	2.2	2.1			2.2	2.1						
		GEAR BOX	2.4	2.9			2.4	2.8						
	COOLER	J.C.W.	2.4	2.5			2.4	2.5						
		SW	1.9	1.6			1.9	1.6						
	F.O. BOOST		1.1	1.0			1.2	1.2						
TEMPERATURE °C	LO	TO. ENG	50	52			50	50						
		THRUST												
		GEAR BOX	32	32			33	34						
	JCW	MAX OUT	70	70			70	70						
		FR.T. CHG												
	FUEL	TEMP °C	93				90							
		RAIL °C	~~101~~	~~101~~			~~100~~	~~100~~						
	S.W. IN/OUT		12°c				13							
STEAM PRESS														
WATCH/DUTY ENG. INITIAL														

B

WATCH PERIODIC MACHINERY LOG

M.V. MOONDANCE | DATE 27.06.08

	WATCH	0000	0004	0004	0008	0008	NOON	NOON	1600	1600	2000	2000	2400
ELECTRICITY / DIESEL AUX. ENGINES AND TURBO-ALTERATORS	ALT & POWER UNIT	P	S			P	S						
	RUN HOUR												
	LOAD KW												
	MAX EXH T-C												
	JWC TEMP °C												
	LO PRESS kg cm²												
	SUMP CMS	✓	✓										
	L.O. TEMP												
	ALT & POWER UNIT												
	RUN HOUR												
	LOAD KW												
	MAX EXH T-C												
	JWS TEMP-C												
	L.O. PRESS kg cm²												
	SUMP CMS												
	L.O. TEMP												
AIR	START AIR RESERV	1	2	1	2	1	2	1	2	1	2	1	2
	AIR PRESS kg/cm²	24	24										
	AIRSYSTEM	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.
	AIR PRESS kg/cm²	24	6										
OIL	PURIFIERS	LO	DO	LO	DO	LO	DO	LO	DO	LO	DO	LO	DO
	RUNNING HOURS	4/4											
	PURIFIERS	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO
	RUNNING HOURS	4											
	STERN TUBE TEMP °C	P	S	P	S	P	S	P	S	P	S	P	S
		45	39										
	LO FILT. BACK FLUSH INT												
	F.O. FILT. BACK FLUSH INT												
REFRIG	DOMESTIC CHAMBER	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG
						-16	4						

OIL SAMPLE	ME	ME	AUX1	AUX2	AUX3	AUX4	TA1	TA2	STERN	PROP.
MOITURE %										
BOILED WATER TEST YES/NO										

REMARKS

03.40 ARRIVAL PROCEDURE CARRIED OUT
04.14 SHAFT GENERATOR (PORT) OFF
04.42 ST-BY
07.55 DEPARTURE PROCEDURE CARRIED OUT
08.24 ST-BY
09.55 SHAFT GENERATOR (PORT) ON
17.00 ARRIVAL PROCEDURE CARRIED OUT
17.35 SHAFT GENERATOR (PORT) OFF
18.00 ST-BY

CH.ENG.

A

MEDIUM SPEED DIESEL ENGINE	WATCHKEEPING OR PERIODIC PROPULSION PLANT LOG	M.V. MOONDANCE	DATE 28.06.08

WATCH	0000	0004	0004	0008	0008	NOON	NOON	1600	1600	2000	2000	2400
ENGINE	P	S			P	S						
RUN HRS												
COUNTER												
R.P.M.												
LOAD INDICATOR												
SPEED SETTING												
CPP SETTING												
CCP ~~SERVO PRESS~~ T												
SCAV AIR kg/cm³ / °C												
E.R. AIR TEMP °C												
AIR COOLER PRESS DROP 1												
AIR COOLER PRESS DROP 2												
TURBOCHARGERS REVS. X 1000 1												
TURBOCHARGERS REVS. X 1000 2												
TURBOCHARGERS GAS IN/OUT 1												
TURBOCHARGERS GAS IN/OUT 2												
TURBOCHARGERS L.O. PRESS 1												
TURBOCHARGERS L.O. PRESS 2												
EXHAUST TEMPS °C 1 / 9												
EXHAUST TEMPS °C 2 / 10												
EXHAUST TEMPS °C 3 / 11												
EXHAUST TEMPS °C 4 / 12												
EXHAUST TEMPS °C 5 / 13												
EXHAUST TEMPS °C 6 / 14												
EXHAUST TEMPS °C 7 / 15												
EXHAUST TEMPS °C 8 / 16												
J.W. HEADER TK		700				700						
SUMPS CMS		2.8	2.8			2.75	2.9					
PRESSURE Kg/Cm² OIL BRGS												
PRESSURE Kg/Cm² OIL FILTER DP												
PRESSURE Kg/Cm² OIL GEAR BOX												
PRESSURE Kg/Cm² COOLER J.C.W.												
PRESSURE Kg/Cm² COOLER												
PRESSURE Kg/Cm² COOLER SW												
PRESSURE Kg/Cm² F.O. BOOST												
TEMPERATURE °C LO TO. ENG												
TEMPERATURE °C LO THRUST												
TEMPERATURE °C LO GEAR BOX												
TEMPERATURE °C JCW MAX OUT												
TEMPERATURE °C JCW FR.T. CHG												
TEMPERATURE °C FUEL TEMP °C												
TEMPERATURE °C FUEL RAIL °C												
S.W. IN/OUT												
STEAM PRESS												
WATCH/DUTY ENG. INITIAL												

B

WATCH PERIODIC MACHINERY LOG

M.V. MOONDANCE

DATE 28.06.08

		WATCH	0000	0004	0004	0008	0008	NOON	NOON	1600	1600	2000	2000	2400
ELECTRICITY	DIESEL AUX. ENGINES AND TURBO-ALTERATORS	ALT & POWER UNIT	P	S			P	S						
		RUN HOUR												
		LOAD KW	120					120						
		MAX EXH T-C						330						
		JWC TEMP °C	81					80						
		LO PRESS kg cm²	3.6					2.6						
		SUMP CMS	✓					✓						
		L.O. TEMP	57					52						
		ALT & POWER UNIT	0.8											
		RUN HOUR												
		LOAD KW												
		MAX EXH T-C												
		JWS TEMP-C												
		L.O. PRESS kg cm²												
		SUMP CMS												
		L.O. TEMP												
AIR		START AIR RESERV	1	2	1	2	1	2	1	2	1	2	1	2
		AIR PRESS kg/cm²	24	24			24	24						
		AIRSYSTEM	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.
		AIR PRESS kg/cm²	24	6			24	6						
OIL		PURIFIERS	LO	DO	LO	DO	LO	DO	LO	DO	LO	DO	LO	DO
		RUNNING HOURS	4/4				4/4							
		PURIFIERS	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO
		RUNNING HOURS	4				4							
		STERN TUBE TEMP °C	P	S	P	S	P	S	P	S	P	S	P	S
		LO FILT. BACK FLUSH INT												
		F.O. FILT. BACK FLUSH INT												
REFRIG		DOMESTIC CHAMBER	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG
			-16	3										

OIL SAMPLE	ME	ME	AUX1	AUX2	AUX3	AUX4	TA1	TA2	STERN	PROP.
MOITURE %										
BOILED WATER TEST YES/NO										

REMARKS

CH.ENG.

A

MEDIUM SPEED DIESEL ENGINE	WATCHKEEPING OR PERIODIC PROPULSION PLANT LOG	M.V. MOONDANCE	DATE 29.06.05

WATCH	0000	0004	0004	0008	0008	NOON	NOON	1600	1600	2000	2000	2400
ENGINE	P	S			P	S						
RUN HRS												
COUNTER												
R.P.M.												
LOAD INDICATOR												
SPEED SETTING												
CPP SETTING												
CPP ~~SERVO PRESS~~ T												
SCAV AIR kg/cm³ / °C												
E.R. AIR TEMP °C												
AIR COOLER PRESS DROP 1												
AIR COOLER PRESS DROP 2												
TURBOCHARGERS REVS. X 1000 1												
TURBOCHARGERS REVS. X 1000 2												
TURBOCHARGERS GAS IN/OUT 1												
TURBOCHARGERS GAS IN/OUT 2												
TURBOCHARGERS L.O. PRESS 1												
TURBOCHARGERS L.O. PRESS 2												
EXHAUST TEMPS °C 1 / 9												
EXHAUST TEMPS °C 2 / 10												
EXHAUST TEMPS °C 3 / 11												
EXHAUST TEMPS °C 4 / 12												
EXHAUST TEMPS °C 5 / 13												
EXHAUST TEMPS °C 6 / 14												
EXHAUST TEMPS °C 7 / 15												
EXHAUST TEMPS °C 8 / 16												
J.W. HEADER TK	700				700							
SUMPS CMS	2.8	2.8			2.8	2.8						
PRESSURE Kg/Cm² OIL BRGS												
PRESSURE Kg/Cm² OIL FILTER DP												
PRESSURE Kg/Cm² OIL GEAR BOX												
PRESSURE Kg/Cm² COOLER J.C.W.												
PRESSURE Kg/Cm² COOLER												
PRESSURE Kg/Cm² COOLER SW												
PRESSURE Kg/Cm² F.O. BOOST												
TEMPERATURE °C LO TO. ENG												
TEMPERATURE °C LO THRUST												
TEMPERATURE °C LO GEAR BOX												
TEMPERATURE °C JCW MAX OUT												
TEMPERATURE °C JCW FR.T. CHG												
TEMPERATURE °C FUEL TEMP °C												
TEMPERATURE °C FUEL RAIL °C												
TEMPERATURE °C S.W. IN/OUT												
STEAM PRESS												
WATCH/DUTY ENG. INITIAL												

B

WATCH PERIODIC MACHINERY LOG

M.V. MOONDANCE | DATE 29.06.0[illegible]

		WATCH	0000	0004	0004	0008	0008	NOON	NOON	1600	1600	2000	2000	2400
ELECTRICITY	DIESEL AUX. ENGINES AND TURBO-ALTERATORS	ALT & POWER UNIT	P	S			P	S						
		RUN HOUR												
		LOAD KW	105				105							
		MAX EXH T-C												
		JWC TEMP °C	82				82							
		LO PRESS kg cm²	3.7				3.6							
		SUMP CMS	V	V			V							
		L.O. TEMP	56				57							
		ALT & POWER UNIT	0.8				0.8							
		RUN HOUR												
		LOAD KW												
		MAX EXH T-C												
		JWS TEMP-C												
		L.O. PRESS kg cm²												
		SUMP CMS												
		L.O. TEMP												
AIR		START AIR RESERV	1	2	1	2	1	2	1	2	1	2	1	2
		AIR PRESS kg/cm²	24	24			24	24						
		AIRSYSTEM	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.	Start	Cont.
		AIR PRESS kg/cm²	24	6			24	6						
OIL		PURIFIERS	LO	DO	LO	DO	LO	DO	LO	DO	LO	DO	LO	DO
		RUNNING HOURS	4/4				4/4							
		PURIFIERS	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO	HO
		RUNNING HOURS	4				4							
		STERN TUBE TEMP °C	P	S	P	S	P	S	P	S	P	S	P	S
		LO FILT. BACK FLUSH INT												
		F.O. FILT. BACK FLUSH INT												
REFRIG		DOMESTIC CHAMBER	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG	MEAT	VEG
							-16	4						

OIL SAMPLE	ME	ME	AUX1	AUX2	AUX3	AUX4	TA1	TA2	STERN	PROP.
MOITURE %										
BOILED WATER TEST YES/NO										

REMARKS

17-30 DEPARTURE PROCEDURE CARRIED OUT
17-54 STD-BY
18-10 Alarms high temperature alarms on Aux Diesel No 1
18-15 Eng blackout occurred as Aux Diesel engine shut down due to high fresh water cooling temperature

CH.ENG:

Annex B

Form MD 32-07 - Port Departure Procedure

Port Departure Procedure

PORT: W.P. **DATE:** 29/06

AT 30 MINUTES NOTICE TO STAND BY:

1. Check load on switchboard. Two alternators to be running for stand by.
2. Check ME oil levels (T/C's, gearbox, governors, sumps)
3. Start reserve L.O. double and reserve reduction gear L.O. pumps.
4. Start CPP/VPP pumps.
5. Check CPP/VPP controls ECR & Bridge.
6. Propeller pitch is at Zero.
7. Start nozzle cooling pump.
8. Check fuel oil booster pump and visco-therm pump are running.
9. Set visco-therm to normal operation position.
10. Switch off preheating pump and close valve
11. Start FW pump.
12. Turn engines with turning gear. Remove turning gear.
13. Open starting air valves
14. Start engine fans.

AT 20 MINUTES BEFORE STAND BY:

1. Kick engines over on air and close indicator cocks.
2. Follow procedure MD10/07 for starting engines.
3. Start main engines and run at 480 rpm. All to warm up.
4. Check stand by/reserve pumps are off.
5. Close all drains (T/C & air cooler) after checking for water.
6. Start main sea water pump.
7. Stop harbour circulating pump and open isolating valve.
8. Open sea water valves to gearbox and CPP/VPP coolers.
9. Increase main engine speed to 600rpm.

AT STAND BY:

1. Prove bridge to ECR communications.
2. Confirm stand by with telegraphs.
3. If on ECR control change over to bridge control.
4. Power to bow thruster.
5. Complete relevant sections of movement sheet.
6. Complete ER log book confirming departure procedures completed.
7. Close heeling pump isolating valves

SIGNED:

Emergency Checklist No.8 - Grounding/Stranding

GROUNDING / STRANDING

- ☐ The OOW must call the **Master** immediately after taking priority action to safeguard life
- ☐ The Master must call the **Superintendent** at the earliest opportunity after effecting the ships emergency priorities

- ☐ ME pitch to zero. Note time of grounding
- ☐ Sound the GENERAL EMERGENCY ALARM
- ☐ Inform Engine Room. Sea suctions to high
- ☐ Close watertight / fire doors
- ☐ Switch on deck lighting at night
- ☐ Exhibit lights/shapes and make appropriate sound signals
- ☐ Inform vessels in immediate vicinity
- ☐ Inform port authority
- ☐ Inform local Coastguard
- ☐ Fix ship's position and update GMDSS station if necessary
- ☐ Broadcast ALERT and MESSAGE: DISTRESS, URGENCY or SAFETY
- ☐ VHF to Channel 16
- ☐ Fire-fighting equipment ready for immediate use
- ☐ Damage assessment:

  Sound all compartments
  Casualties
  External damage
  Internal damage (visual inspection where possible) Check all watertight closures, stern glands and access doors remain tight
  Watertight integrity of hull
  Engine Room status
  Fire risk
  Pollution risk

- ☐ Check depth of water around ship. Determine where the deeper water lies. Determine nature of sea bed
- ☐ Ascertain time and height of tide. Obtain information on local tides and currents, particularly rise and fall.
- ☐ Monitor draughts and compare with flotation draughts
- ☐ If flooding refer to **Emergency Checklist 10 - FLOODING**
- ☐ If pollution: refer to **Emergency Checklist 15 Spills – Damage to Vessel**
- ☐ Consider:

  Possibility of floating off if no damage or if tide rising rapidly. This may be aided by pumping out ballast or adjusting trim
  Possibility of remaining in position particularly if bottom damage plugged by seabed
  Ballasting tanks to harden ship in position and reduce wave induced damage
  Tugs
  Port of refuge

- ☐ When the emergency is over, broadcast to ALL STATIONS to cancel

Form MD 28-07 - Local/Emergency Operation of Pitch Control

Local/Emergency operation of Pitch Control

1. Establish communication with bridge via emergency telephone situated by port shaft, just forward of local control point.
2. Lift up floor plate and ensure it is secure.
3. Turn knurled nut clockwise so as to engage hand wheel with worm gear. Knurled nut is situated on the starboard side of each shafts pitch control unit.
4. Turn hand wheel to change pitch.
5. Check pointer to see what pitch is set. The pointer is situated by the knurled nut mentioned in 1, above.
6. To disengage hand wheel, turn knurled nut anti-clockwise.
7. Test pitch control from ECR and Bridge, to ensure all working correctly.

Annex E

CPP indicator alignment check results

Moondance C PP Stability and indicator Alignment Checks

Bridge - Port Lever Demand Position	Bridge Stb'd Lever demand Position	Bridge - Port Pitch Indicator Actual Position	Bridge Stb'd Pitch Indicator Actual Position	Port Bridge Wing - Port Pitch Indicator Actual Position	Port Bridge Wing - Stbd Pitch Indicator Actual Position	Stb'd Bridge Wing – Port Pitch Indicator Actual Position	Stb'd Bridge Wing – Stb'D Pitch Indicator Actual Position	Engine Control Room - Port Pitch Indicator Actual Position	Engine Control Room - Starboard Pitch Indicator Actual Position	Port CPP Mechal Indicator Position	Stb'd CPP Mechanical Indicator Position	Port system stable (Y/N)	Stb'd system stable (Y/N)
0	0	-1	0	-1	0	-1	0	0	0	0	0	Y	Y
AH 2	AH 2	+5	+7	+6	+9	+4	+7	+7	+6	1.3	1.3	Y	Y
4	4	+14	+16	+16	+18	+12	+17	+16	+16	3	3	Y	Y
6	6	+22	+25	+26	+26	+21	+27	+25	+25	4.5	4.8	Y	Y
8	8	+26	+29	+30	+32	+25	Off Scale	+30	+28	5.2	5.9	Y	Y
10	10												
AS 2	AS 2	-12	-5	-12	-5	-12	-6	-12	-6	-2	-1.5	Y	Y
4	4	-16	-11	-16	-11	-18	-13	-16	-11	-3.4	-2.5	Y	Y
6	6	-16	-16	-16	-16	-19	-19	-16	-17	-4.8	-3.6	Y	Y
8	8	-16	-22	-16	-21	-18	-24	-16	-22	-5.9	-4.4	Y	Y
10	10												

ECR Port Lever Demand Position	ECR Stb'd Lever demand Position	Bridge - Port Pitch Indicator Actual Position	Bridge Stb'd Pitch Indicator Actual Position	Port Bridge Wing - Port Pitch Indicator Actual Position	Port Bridge Wing - Stbd Pitch Indicator Actual Position	Stb'd Bridge Wing – Port Pitch Indicator Actual Position	Stb'd Bridge Wing – Stb'D Pitch Indicator Actual Position	Engine Control Room - Port Pitch Indicator Actual Position	Engine Control Room - Starboard Pitch Indicator Actual Position	Port CPP Mechal Indicator Position	Stb'd CPP Mechanical Indicator Position	Port system stable (Y/N)	Stb'd system stable (Y/N)
0	0	0	0	0	0	+1	0	0	0	0	0	Y	Y
AH 2	AH 2	7	10	8	10	5	10	9	9	1.4	1.6	Y	Y
4	4	17	17	20	19	16	18	18	20	3.5	3.2	Y	Y
6	6	28	27	31	27	26	27	26	30	4.6	4.8	Y	Y
8	8											Y	Y
10	10												
AS 2	AS 2	-9	-5	-9	-4	-10	-6	-9	-9	-1.4	-1.6	Y	Y
4	4	-15	-10	-16	-9	-17	-11	-15	-10	-2.2	-2.2	Y	Y
6	6	-16	-14	-16	-14	-18	-16	-16	-14	-3.7	-3.1	Y	Y
8	8												
10	10												

Intakematic Marine Growth Protection System manual -
Section 6 - Operating Instructions

6: OPERATING INSTRUCTIONS:

Once the system installation is complete and the system has been commissioned the power supply can be energised. Whilst reading these notes refer to the drawing of the power unit module controls and the system wiring diagram provided with this manual.

The current provided to each anode is adjusted by turning the potentiometer knob relating to that anode. The actual current being supplied as the knob is turned is shown by the Digital Display immediately above. The current settings required by this particular system are shown below:

Anode Reference	Anode Description	Normal Setting
CU 01	Copper 250/82.5	0.3 Amps
AL 01	Aluminium 250/82.5	0.3 Amps
CU 02	Copper 250/82.5	0.3 Amps
AL 02	Aluminium 250/82.5	0.3 Amps
FE 01	CAST IRON 50 82.5	0-3 AMPS
FE 02	CAST IRON 250/82.5	0-3 AMPS.

Notes:

a) Where sea-chests and strainers are not in operation for a period of time it is advisable that current settings be reduced to 0.2A

b) If infestation is present at the time of installation it is advisable that the current settings are increased by 0.2A for 4 weeks. This should accelerate the clearance of existing growth. Once growth has cleared it is important that normal system settings are used.

c) When an anode has nearly consumed, its corresponding digital reading will show either a decline in current or CA. Once it is confirmed that the anodes life has ended, reduce the current setting to zero until the anode is replaced. For explanation of this and other ***alarm conditions*** the unit may display, refer to section 2 of this manual - ***"Specification of Intakematic System"***

d) The effective operation of the system can only be determined by inspections of the sea-water system. It is suggested that if the opportunity to examine a strainer, length of piping or heat exchanger arises, it should be taken.

In all cases it should be remembered that where anode currents are increased, anode life will be reduced. Whilst all ***Wilson Taylor*** Systems are designed with a reserve of anode material a case could arise where the sea-water system is no longer being protected. ***Should there be any doubts about raising system currents, it is strongly recommended that the Wilson Taylor Technical Department be contacted for advice.***

Annex G

ECR Alarm panel set point chart - entry 113

C:/MSWKS/CALIBRATION/ELSETPTS

AL.No.	Description	Function	Function	+/-	Locat.	Test Date	Next
						13.03.06	
31	Port CPP OD box temp. high	alarm	75 °C			✓	
81	Stbd CPP OD box temp. high	alarm	65 °C			✓	
	AUX. DIESEL Stbd						
121	LO.press low	alarm	1.5 bar			✓	
	L.O. press. too low	shut down	1.2 bar			✓	
122	L.O. temp. high	alarm	85 'C			monthly	✓
123	F.C.W. temp. high	alarm	85 °C			monthly	✓
	F.C.W. temp. too high	shut down	95 °C			monthly	✓
124	F.C.W. press. low	alarm	1.0 bar			✓	
	Overspeed	shut down	63 Hz		AZ1	monthly	✓
	AUX DIESEL Port						
111	L.O Press.low	alarm	1.5 bar			✓	
	L.O Press.too low	shut down	1.2 bar			✓	
112	L.O.temp high	alarm	85 'C			monthly	✓
113	F.C.W. temp. high	alarm	85 'C			monthly	✓
	F.C.W.temp.too high	shut down	95 °C			monthly	✓
114	F.C.W.press.low	alarm	1.0 bar			✓	
	Overspeed	Shut down	63 Hz		AZ1	monthly	✓
159	Bowthrust room	alarm	Function			weekly	✓
169	Engine room bilge	alarm	Function			weekly	✓
169	Steering gear bilge	alarm	Function			weekly	✓
144	Lower hold bilge	alarm	Function			weekly	✓
167	Bilge seperator	alarm	15 ppm			✓	
	Oxymeter	alarm	19o/o O2			✓	
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Safety Management Certificate dated 12 June 2008

DET NORSKE VERITAS

Certificate No:
D20796/080612F
Date of issue:
2008-06-12

SAFETY MANAGEMENT CERTIFICATE

Issued under the provisions of the INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, as amended

under the authority of the Government of

THE COMMONWEALTH OF THE BAHAMAS

by **Det Norske Veritas AS**

Particulars of ship

Name of ship:	**"MOONDANCE"**
Distinctive number or letters:	**C6HL6**
Port of registry:	**NASSAU**
Type of Ship[1] :	**Other cargo ship**
Gross.tonnage:	**5881**
IMO number:	**7800112**

Particulars of Company

Company Name:	**Seatruck Ferries Shipholding Ltd**
Company Address:	**North Quay** **Port of Heysham** **Lancashire LA3 2XF** **United Kingdom**
Company identification number:	**5310141**

THIS IS TO CERTIFY:
that the safety management system of the ship has been audited and that it complies with the requirements of the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code), following verification that the Document of Compliance for the Company is applicable to this type of ship.

This Safety Management Certificate is valid until: **2011-05-19**, subject to periodical verification and the validity of the Document of Compliance remaining valid.

Completion date of audit on which this Certificate is based: **2006-05-19**

Issued at **Høvik, Norway** on **2008-06-12** .

for **Det Norske Veritas AS**

Head of Section

[1] Insert the standard IMO ship type.

Endorsement for periodical verification and additional verification (If required)

THIS IS TO CERTIFY:
that at the periodical verification in accordance wtih regulation IX/6.1 of the Convention and paragraph 13.8 of the ISM Code, the safety management system was found to comply with the requirements of the ISM Code.

Intermediate Audit range: 2008-05-19 to 2009-05-19

Intermediate Verification[2]: Place: ..... Date: .....

Signature: .....

Stamp

Surveyor, Det Norske Veritas AS

Additional Verification [3] : Place: ..... Date: .....

Signature: .....

Stamp

Surveyor, Det Norske Veritas AS

Additional Verification [3] : Place: ..... Date: .....

Signature: .....

Stamp

Surveyor, Det Norske Veritas AS

Additional Verification [3] : Place: ..... Date: .....

Signature: .....

Stamp

Surveyor, Det Norske Veritas AS

[2] To be completed between the second and third anniversary dates.
[3] If applicable. Reference is made to the relevant provisions of section 3.2 "Initial Verification" of the Revised Guidelines on Implementation of the International Safety Management (ISM) Code by Administrations adopted by the Organization by resolution A.913(22).

Annex I

DNV ISM Code Certification - Company Audit Report
dated 10 September 2007

DET NORSKE VERITAS

ISM CODE CERTIFICATION
Company Audit Report

Company Name (main DOC holder): **Seatruck Ferries Shipholding Ltd.**	DNV Id No.: **124692**

Company Address:
North Quay
Port of Heysham
Lancashire LA3 2XF

Company Branch Office Locations (if any):
NA

Audit Request:
Document Assessment ☐ Initial ☐ Annual ☒ Renewal: ☐
Previous Full Term DOC Expiry Date:

Additional: ☐ (Scope/reason):

Date of Audit: **10 Sept. 2007** Audit Location: **Heysham**

Report Preparation Date: **10 Sept. 2007** Main Office ☒ / Branch Office ☐

Type of ships included in the DOC:

Passenger ship	☐	Bulk Carrier	☐	Gas Carrier	☐
Passenger,High-Speed Craft	☐	Oil Tanker	☐	Mobile Offshore Drilling Unit	☐
Cargo High-Speed Craft	☐	Chemical Tanker	☐	Other Cargo Ship	☒

Company Contract / Order Request References: **54107504**

DNV Lead Auditor:

Audit Team:

The audit has been conducted in accordance with the ISM Code /SOLAS Chap. IX

Under the authority of the Government(s) of: **Bahamas**

Flag State authorisation(s) verified ☒

Corrective actions from previous audits were verified ☒ If not completed, see Non-Conformity No.

The audit resulted in the following number of:

Major Non-Conformities (Unresolved)	0
Major Non-Conformities (Downgraded)	0
Non-Conformities	0
Observations	7

DET NORSKE VERITAS

ISM CODE / ISO CERTIFICATION / OTHER

Observation

Note No.: 1 of 1
Date: 2007-09-10

Company Name:	DNV Id. No.:
Seatruck Ferries Shipholding Ltd.	**124692**
Ship Name:	DNV Id. No.:
-------	-------

Company Audit ☒ Ship Audit ☐ Lead Auditor: Signature: .....

Audit Team:

Descriptions with references to relevant requirements or guidelines:

1. **It is suggested that a means of tracking open NC, incident reports etc. be investigated.**

2. **It is suggested that 'root cause' identification be made for each and every incident/accident.**

3. **It is noted that there are very good levels of communication between the ships and the office.**

4. **It is suggested that some form of benchmarking be applied to the vessels in the fleet so that trends can be identified.**

5. **It is noted that the majority of forms are in the process of being revised – this opportunity should be used to ensure that all relevant information is being captured.**

6. **It is noted that the company's crisis management procedure is in the process of being revised and when complete will be exercised.**

7. **Everybody interviewed was most helpful – Thank You.**

Annex J

Seatruck Ferries internal ISM audit report
dated 17 December 2007

From

To (Safety & Quality Manager)

INTERNAL ISM AUDIT on M/V MOONDANCE

17th DECEMBER 2007 at HEYSHAM

An internal $ISM audit was carried out by whilst the vessel was in Heysham port on a Monday lay over day. Safety procedures, safe working practices and correct use of personal protective clothing were observed throughout my time on board the vessel. The master & the crew extended every assistance to me during the audit.

The following crew members have been interviewed.
Captain
Chief Engineer
Chief Officer
2nd Officer
3rd Engineer
Electrician
Bosun
AB
AB
Cook
Stwd
Fitter
Motorman

All crew members showed a good knowledge of the Safety Management System relating to their specific duties and responsibilities on board. All crew knew who the designated person (DPA) is and had good knowledge of the company's Health & safety, Environment, Security & Drug & Alcohol policies.

The Following observations can be made.

1) Risk Assessments. Although there is a risk assessment form in the SMS as yet no risk assessments have been done & there is no risk assessment file in place. It is hoped that shore management team could produce some generic risk assessments and the ship's staff will then add some ship specific risk assessments to the file.
2) There is currently no paper copy of the completed planned maintenance reports on the deck and safety planned maintenance as there is a problem getting the printer in the ships office to print from a DOS program. Superintendent is aware

3) There is no copy of Chief Eng. Bahamas license (applied for in July 2007) though there is a copy of the Confirmation of Receipt of Application
4) Safety drills & training exercises are recorded in the official log book but not in the deck log book.
5) Change of ships security officer (Chief Eng to Chief Off) is not always recorded in the official log book (mostly not the change back to chief eng) Chief Eng to take a security officers course as soon as possible (office is aware and ship awaiting reply from personnel dept)
6) Hours of rest forms in E/R for engineering staff have not been signed by master or master's authorised representative. Master to appoint chief engineer as his representative, inform the office, and chief engineer then to countersign all hours of rest forms.
7) The company policy statements posted on the bridge are an old version. The ones on the notice board are the current version (master informed and corrective action carried out)
8) The engine room staff would like a safety cut off foot bar to be fitted on to the lathe in the workshop. This item to be brought up at the next on board safety meeting, and if considered a good idea to be submitted to the SQM for approval.

Many thanks to all the ships staff for their assistance in completing this audit.

Best Regards

Chief Engineer’s Standing Orders

CHIEF ENGINEERS STANDING ORDERS

1. These standing orders are to be read in conjunction with relevant sections of the ships ISM manual.

2. Nothing in these standing orders shall be construed as relieving any engineer officer or member of engineroom staff of their responsibility as defined by law; government, classification society, flag state, or port state regulations; or from the exercise of sound professional judgement.

3. These standing orders are to be signed by all engineer and electrical officers. Signature sheet is at the front of this file

4. Safety of the vessel is secondary only to safety of personnel. Shipboard safety is to take precedence over all other considerations.

5. Engine room personnel joining the vessel for the first time are required to familiarise themselves with all the safety and emergency equipment onboard.
The engineer officers are to be familiar with there duties.

6. The company's drug and alcohol policies are to be strictly adhered to. On no account must alcohol be consumed or taken into any machinery space, control room or workshop.

7. On taking over a watch an engineer officer must familiarise himself as to:-

A) The general condition of the machinery.
B) The progress of jobs during the previous watch, work location, and deployment of personnel.
C) Operating parameters of main engines.
D) Alternators in use and those available for use
E) Fuel and lubricating levels
F) Bilge conditions
G) The progress of any transferring of fuel, lubricants, waste oils or bilges
H) The security state and condition of machinery spaces as defined in the ship security manual

8. The relieving engineer officer must be fully satisfied with the above before he assumes responsibility of the watch

9. The Engineering Officer been relieved must be satisfied that the relieving officer is in a fit state to take over the watch.

10 The watch keeping officer must maintain frequent rounds of the machinery and must not solely rely on remote gauges and alarms.

11. All machinery shall be operated within the parameters set by the Chief Engineer Officer. However, this shall not prevent the engineer officer of the watch taking remedial action which, in his judgement, will avoid an accident, damage to the machinery or damage to the vessel.

12. The watch keeping officer shall ensure that there is sufficient generating capacity at all times, in order that the fire fighting capacity of the ship is not impeded.

13. Whilst the vessel is manoeuvring the watchkeeping officer or the Chief Engineer must in the control room at all times.

14. All transferring or bunker operations involving fuel, lubricating oil, waste oil, or bilges must be carried out in accordance with Chief Engineer's instructions and company regulations. Details of all transferring must be entered in the oil record book as required by port and flag state regulations.

15. BILGE PUMPING OVERBOARD PROCEDURES:
Bilge water overboard is only to be pumped through 15 ppm bilge water separator and in accepted locations, check with bridge. All pumping to be recorded in Oil Record Book.
No water to be pumped overboard without Chief Engineer's authorization.
Bilge water pumps to be operated by engineers only.

16. The engineer officer of the watch is responsible for maintaining the security of the machinery spaces and reporting any security breaches or concerns to the SSO.

17. Any machinery breakdown affecting the propulsion, manoeuvring capability, generating capacity or safety of the vessel must be reported immediately to the Chief Engineer officer.

18. SAFETY CHECKS:
Safety checks and emergency gear tests are to be carried out on a weekly basis, usually on Saturdays, and take priority over other routine work.

Test or checks of the following safety and emergency gear will include in the above routines and a record maintained in the engine room logbook.

EMERGENCY GENERATOR on load by opening supplies to emergency switchboard.
FIRST START ARRANGEMENT.
ALL FIRE PUMPS
LIFEBOAT ENGINE, (Starboard.)
FIRE ALARM PANEL
All BATTERIES, (to be recorded in battery log).
STEERING GEAR and CPP will be fully tested before leaving port.

Any defect in the above will be reported and dealt with as soon as possible.

19. L.O. TESTING
The main engine Lub oil will be tested for water content & viscosity on a weekly basis.

20. HANDOVER NOTES
When leaving the vessel all engineers, this includes electrician, to complete a handover report, in English, a copy of which must be handed to Chief Engineer.

21. IF IN DOUBT ASK, THE CHIEF ENGINEER OR SECOIND ENGINEER IS ALWAYS AVAILABLE!

Chief Engineer
19th September 2007

Chief Engineer
19th September 2007

Annex L

Master’s Bridge Watchkeeping Standing Orders

SEATRUCK

M/V MOONDANCE MD06

Masters bridge watchkeeping standing orders.

All deck officers are to make themselves familiar with the following publications which are carried on board.

1	ICS Bridge procedures guide
2	Bridge team management, a practical guide.
3	MSN, MGN, MIN shipping notices
4	STCW 95
5	SOLAS
6	Company Safety Management Manual (SMM)

During the hours of darkness and in restricted visibility a lookout will be present on the bridge.

During the hours of daylight the lookout may work around the accommodation area but must be immediately available to the duty officer of the watch (OOW)

During heavy weather frequent inspections will be made on the vehicle decks and an extra man will be called if necessary. VHF communication by walkie talkie will be maintained between he seaman and the OOW during these inspections

A continuous listening watch is to be maintained on VHF 16 VHF 70 (DSC) & MF DSC frequencies. Channels 12 or 14 for port operations shall be monitored when in range.

The GMDSS log book shall be kept updated and all relevant details of tests and messages entered as necessary

Weather reports and shipping forecasts shall be obtained as often as possible

All relevant Navtex messages are to be initialled by the OOW, filed, and acted upon as necessary, charts affected shall be updated with the nav warning.

The vessels position is to be fixed at regular intervals using every possible means at the OOW's disposal.

Compass errors are to be taken at least once a crossing if possible and the gyro & magnetic compasses regularly compared.

Enter all relevant information in the deck log book, including the engineroom safety call during the times there is only 1 engineer in the engineroom..

When making an alteration of course for traffic as required by the international rules and regulations for preventing collisions at sea ensure it is positive, made in ample time and with due regard to the observance of good seamanship.

The engines are available for use at any time. A reduction of speed can be just as effective as an alteration of course.

Call the master if :-

Visibility falls below 1 mile
The movement, number, or proximity of other vessels is causing concern
There is difficulty in maintaining the vessels course
There is any doubt regarding the vessels position
There is engine or steering gear failure or any malfunction of bridge equipment
Heavy weather is encountered
There is potential danger to the ship or cargo
There is any emergency, including fire, man overboard, distress traffic or a pollution / environmental incident.
There is anything you are unsure about.

IF YOU ARE IN ANY DOUBT OR UNSURE IF YOU SHOULD CALL, THEN CALL THE MASTER. THAT IS WHAT HE IS HERE FOR.

Moondance – June 2008.

SEATRUCK

APPROVED BY

DATE 20/6/08

SMS Section 3 - SP03 Drill Schedule

MV. MOONDANCE.

ANNUAL DRILL SCHEDULE - 2008.

ALL DRILLS WILL INCLUDE CREW MUSTERING AT GENERAL EMERGENCY STATIONS.

TYPE OF DRILL REF: SMM - SP03.	DATE		06-Jan	13-Jan	20-Jan	27-Jan	03-Feb	10-Feb	17-Feb	24-Feb	03-Mar	10-Mar	17-Mar	24-Mar	31-Mar	07-Apr	14-Apr
	WEEK		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	CODE	SCHEDULE															
LSA DRILLS																	
EVACUATION DRILL	L1	MONTHLY															
PORT BOAT, EMBARKATION	L2	MONTHLY															
PORT BOAT, LAUNCHED	L3	12 MONTHLY															
STBD BOAT, EMBARKATION.	L4	MONTHLY															
STBD BOAT, LAUNCHED	L5	3 MONTHLY															
LIFERAFT & SURVIVAL	L6	2 MONTHLY															
MAN O'BOARD	L7	3 MONTHLY															
FIRE DRILLS																	
GALLEY FIRE	F1	MONTHLY															
UVD FIRE	F2	MONTHLY															
MVD FIRE	F3	MONTHLY															
ACCOM FIRE	F4	MONTHLY															
ENGINE ROOM FIRE	F5	MONTHLY															
MISCELLANEOUS CODES																	
SHIFTING OF CARGO	M1	4 MONTHLY															
CASUALTY EVACUATION	M2	6 MONTHLY															
HELI EVACUATION	M3	6 MONTHLY															
COLLISION / GROUNDING	M4	4 MONTHLY															
MAIN ENGINE FAILURE	M5	4 MONTHLY															
FIRST AID	M6	2 MONTHLY															
EMERGENCY STEERING	M7	MONTHLY															
SOPEP	M8	2 MONTHLY															
ENCLOSED SPACE RESCUE	M9	2 MONTHLY															
SECURITY (ISPS) DRILL																	
BOMB SEARCH	S1	6 MONTHLY															
	S2	3 MONTHLY															

Chief Engineer’s technical instruction -
MD11 Change Over of Vessel’s Power Source and SMS Section 4 -
Ship Specific Procedures/Forms/Guidelines instruction -
MD11 Ballasting Procedures

Change over of vessel's power source

Before changing the power source of the vessel from Diesel Alternators to Shaft Alternator, or from Shaft Alternator to Diesel Alternator, it is essential that permission is obtained from the officer of the watch on the bridge, as a malfunction and power failure could result in a hazard to navigation and cause the vessel to be endangered.

M.V.Moondance MD11

Ballasting Procedures

The Chief Officer is solely responsible for Ballasting during cargo operations, whether using the Manual or Automatic Heeling Tank system.

On departure when the vessel is satisfactorily upright the system will be shut down and the valves closed.

There must be prior dialogue between the Chief Officer and Chief Engineer/Duty Engineer if either party wishes to heel the vessel during a port layover for Bunkering,washing-down etc.

Any transfer of ballast at sea between the heeling tanks must first be discussed by the Duty Engineer and Bridge OOW and then closely monitored.

Apart from the heeling tanks, no ballast is to be moved without the Master's knowledge and assent.

Apart from the heeling tanks, any tank which has ballast added or removed must be immediately sounded to confirm the situation.

APPROVED BY

DATE 21/10/04

crescent marine services

Annex O

Seatruck Ferries Shipholding Ltd's letter -
Controllable Pitch Propellers dated 16 July 2008

SEATRUCK

Seatruck Ferries Shipholding Ltd
North Quay
Port of Heysham
Lancashire
LA3 2XF
Tel +44 1524 855377
Fax +44 1524 855908

Date: 16/7/08

From: , Superintendent

To: Master, Chief Engineer m.v. Moondance

Controllable Pitch Propellers

In order for a good record to be kept of when the local control of CPP is tested please include in your annual drill schedule Local/Emergency control of C.P.P. on a 3 Monthly basis.

In addition can you ensure that a notice is permanently displayed at the engine controls on the bridge and in the Engine Room stating:

'In the event of loss of hydraulic pressure pitch will move to full astern when shaft turning.'

Best regards,

Seatruck Ferries Shipholding's letter -
Moondance Grounding Corrective Action dated 28 August 2008

SEATRUCK

Seatruck Ferries Shipholding Ltd
North Quay
Port of Heysham
Lancashire
LA3 2XF

Tel + 44 1524 855377
Fax + 44 1524 855908

Date: 28 August 2008

From: SQM Manager

To: Master / Chief Engineer Officer, all Seatruck vessels

Re: **MOONDANCE GROUNDING – CORRECTIVE ACTION**

Gentlemen,

On 29 June 2008, Moondance grounded in Warrenpoint Harbour, following a complete electrical power failure, causing irreparable damage to both rudder stocks.

Following the incident the Company has conducted an extensive investigation to establish the causes and circumstances leading to the grounding with the objective of improving safety from the lessons learnt.

Although the actual cause of the black-out cannot be fully ascertained, it seems most likely that the black-out was the result of the cross-connection isolating valve to the generators not being open, thus resulting in the engines overheating and shutting down. This caused the CPP to fail and default to the astern position.

During the course of the investigation a number of shipboard practices were identified as being detrimental to the safety of the vessel. In most cases these practices indicated varying degrees of complacency. The nature of our trade requires the same routines to be carried out frequently, which unless properly monitored and managed will lead to complacency.

These practices will be addressed in the forthcoming major review of the Company's Safety Management System; however it is prudent that various instructions be issued immediately. In due course these instructions will be included in the Safety Management Manual.

Although the Company is taking action by issuing these instructions, the nature of the practices leading to the incident, indicated a failure to observe good seamanship and not necessarily a failure of the Safety Management System. The effectiveness of the SMS relies upon senior officers ensuring its strict compliance. It is the duty of all personnel to adopt the highest possible professional standards.

These instructions apply to all vessels.

ENGINE ROOM MANNING

At all times that the vessel is in pilotage waters, including shifting berths, and the main engines are on standby the Chief Engineer Officer (CEO) must be immediately available to the Engineer Officer of the Watch (EOOW). In all cases that a checklist has been completed prior to departure or arrival by the EOOW, the CEO must, so far as practicable, satisfy himself that such checks have been satisfactorily completed. Where the CEO deems it necessary that his presence would be best suited at a place other than the Engine Control Room then he must inform the EOOW of his whereabouts and establish the most effective means of communication, such that the EOOW can immediately contact him.

BRIDGE MANNING

At all times that the vessel is in pilotage waters, including shifting berths, the minimum deck officer manning requirement on the bridge is the Master and an Officer of the Watch.

ENGINEER OFFICER OF THE WATCH HANDOVERS

Where a change of watch is due immediately before a critical event, such as shifting ship, that changeover should be re-scheduled, or the off-going Officer should retain control until completion of the event. In all cases the off-going officer must ensure that the on-coming officer receives a thorough handover and must satisfy himself that handover has been fully understood. Likewise, the on-coming officer must ensure that he receives a thorough handover and not take control until he his entirely satisfied.

CHECKLISTS

On every occasion that a checklist is required to be completed, such checks must be performed methodically and accurately. So far as practicable, the checklist must be consulted frequently whilst carrying out checks. Items that have not been checked must not be marked as such. Bridge checklists must be countersigned by the Master and Engine Room checklists by the Chief Engineer Officer. The pre-completion of checklists, or any part of a checklist, is strictly forbidden.

FAILURE OF CPP

Every Deck and Engineer Officer must be fully conversant with the effect a power failure will have on the CPP system and the resultant pitch. Additionally, prominent notices must be placed by each main engine control position on the bridge and in the ECR, e.g. "IN THE EVENT OF A CPP FAILURE THE PITCH WILL MOVE TO (*full astern / full ahead / neutral*)".

MANOEUVRING INDICATIONS

Extreme caution should be exercised during a power failure when observing manoeuvring indicators (e.g. main engine RPM), as they may not be supplied by the emergency source of power. This is particularly important where an indicator is showing zero. For example, if the shaft RPMs are indicating zero, it should not be assumed that the main engines have stopped. During routine black-out exercises, observations should be made and recorded of the effect this has on each item of equipment.

SEATRUCK

MAIN ENGINE EMERGENCY STOPS

All Deck Officers should be aware of the function of main engine emergency stops. Such controls should be routinely tested in cooperation with the ECR as part of the vessel's planned maintenance.

RECORDING TIMES

Times of navigational events should be recorded accurately. Bridge and engine room clocks should be synchronised as part of pre-arrival and pre-departure checklists.

COMMUNICATIONS

It is imperative that during an emergency situation an effective stream of information is maintained, particularly between the bridge and engine room.

A forthcoming major review of the Safety Management System will include all of the above instructions. In the meantime I would welcome any suggestions you may have to further improve our operating practices and indeed ways in which we can protect against complacency.

Regards,

SQM Manager