Loading Operational Exercises Introduction

Simulator Operational Exercises

1a. – Final preparation and Commence Loading cargo / Ramp up / Chief Officer in CCR /

1b. – Maximum Cargo Load rate / Chief Officer in CCR

1b. - Handling Max. Cargo Load rate by OOW

Commence de-ballasting

Handing Over the Watch

C/O carry feeding back other Junior officers

LOAD PORT TIME SHEDULE

Times on this schedule are for reference only, and will be discussed on Ship Shore Meeting.

Schedule Time		Actual Time		Description and Remarks	
06:00				Heel O/B	212 m3
06:00		06:00		NOR tendered	
06:00		06:00		POB	
07:00	07:30	07:00	07:30	First Line – All Fast	
07:30	08:00	07:30	08:00	Pre-Operational Meeting	
07:30	08:00	07:30	08:00	Arms Connection and Purging	
08:00	08:15	08:00	08:15	Opening gauging	Gas master shut
08:15	08:30	08:15	08:30	Warm ESD Trip Test	Ship initiate
08:30	09:30	08:30	09:30	Arm Cool down	30 min
09:30	10:00	**Loading Exercise (1) 1a & 1b**		Final preparation for Loading	Check List
10:00	10:10			Commence Loading	Initial rate 1,000 m3/hr
10:10	11:00			Rate Up	R/U diagram
11:00	11:30			Full rate checks	C/O
11:30	12:30			Bulk Loading	OOW
15:00	15:30	**Loading Exercise (2) 1b & 1c**		Final Preparation for Ramp Down	OOW
15:30	16:00			Final Preparation for Ramp Down	C/O
16:00				Commence Ramp Down	R/D diagram
16:00	17:00			Ramp Down	Ship's Stop
17:00	17:30			Ship's manifold draining	
				Ship's Manifold N2 purging & Shore Side Draining	
				Final gauging	
				Arms Disconnection	
20:30				Sailing	

Loading Port INFO

- ✓ **Vessel berthed PORT SIDE Alongside Terminal**
- ✓ **Liquid Manifold in use 1,2,3, 4 and Vapor return**
- ✓ **Ships Cargo Tanks cooled down and ready**
- ✓ **Ships Cargo Line cooled down and ready**
- ✓ **ESD connection = Optic + pneumatic back up**
- ✓ **Following Completed**
  - ✓ Shore arms connection, Purging, Pressure test
  - ✓ Warm ESD Test - Ship Optic
  - ✓ Cooling down shore arms
- ✓ **All cargo Machinery set ready, all functional**
- ✓ **Heel on board app. 203 m3**
- ✓ **LNG quantity to Load 98.5% (170,441 m^3)**
- ✓ **Shore max loading rate 12,000 m3/hr**
- ✓ **Stores and provision at any Time**
- ✓ **Class Annual onboard, Safety Inspections**
- ✓ **Ballast Sample ashore**
- ✓ **15 min Notice to Shore for Ramp Down**

AZALEA MARITIME

Please refer to "LNG Marine Loading Terminal" Information

Please refer to "LNG Marine Loading Terminal and LNGC Ship/Shore Checklist" Information

Ship / Shore Meeting Completed

Duties and Responsibilities

- CCR Management
- CCR Task / Duties
- IAS Monitor settings
- Main & Trunk Deck Tasks
- Alarm management
- Distractions
- Communications

CCR Task		Responsible	Parameter
Overseeing all operation			
Orders			
Valves / Pumps Handling			
Checklist (Do > Read) (Read > Do)			
Cargo Logbook entry and Operation records			
ALARM response	BUZZER Stop		
	Announcement		
	FLICKER Stop		
	Actions to be taken…		

CCR Task	Responsible	Parameter
Monitoring CT levels		
Monitoring CT Pressure		
Monitoring x-over line liquid header pressure		
Reporting Manifold pressure		
IBS / IS pressure – Nitrogen Flow		
Gas Burning (Free flow and or L/D comp.		
LNG Vaporiser (if required)		
Ballasting operation		

CCR Task		Responsible	Parameter
Distractions	**Vetting , Surveyors, PSC, OJT**		
	Agent, various Services,		
	Crew Change, Visitors,		
Communication	**Internal Comm. (Deck)** UHF Radios Channel 5)		
	Internal Comm. (Engine) (Telephone 222)		
	External Comm. Terminal (VHF Radios Ch. 67)		
	External Comm. with Charterer / Company /Agent/ (Telephone 222)		

IAS Monitors Layout		Responsible
Monitor 1		
Monitor 2	**Stability & CTMs** (Tools > Stability-Tools-Online Interface-Monitor Mode – 15sec)	
Monitor 3		
Monitor 4		
Monitor 5	**Particular Machinery Room Equipment**	
Monitor 6	**Machinery Room General**	
TV Screen + + 2 x Monitors	**Alarm Management**	
TV Screen + 2 x Monitors	**Trends** (Tools > Trends > Real Time Trends > Create Trends> Import Trends)	
TV Screen + 2 x Monitors	**Hourly rate Calculations**	

Main & Trunk deck Tasks	Who	Parameter
Å Liquid Dome particular Tank (Leak)		
Å Float Gauges readings		Level movements, level confirm
Å Valve position		Flag indicator butterfly, Globe valve up/down indicator
Å Local Press gauges reading		Gauge layout…
Å Trunk Deck watchman		Leak, vibrations, safety valves lifting
Å Gangway (Security watch)		Expected visitors list, MARSEC 1
Å Manifold watch Port Side		Leak, unused line frosting, Safety valve lifting
Å Vapor Arm Angle		Envelope 0 to 5 degrees
Å Manifold Pressure		0.5 change r/u
Å Manifold watch STBD side		No pressure, no leak, no frosting…
Å Mooring Station F & A		
Å Safety Rounds		

Loading Exercise 1 = Total 3 hours

FINAL Preparations (30 min)

- Delegate Duties
- Line Up for Loading
- Check Communication
  - Internal UHF Ch. 5
  - External: VHF 67
  - Tel No. 222
- Set IAS Monitors
- Trends monitoring
- Stability monitoring
- CTM monitor ON
- Check List in use

Ramp Up (60 min)

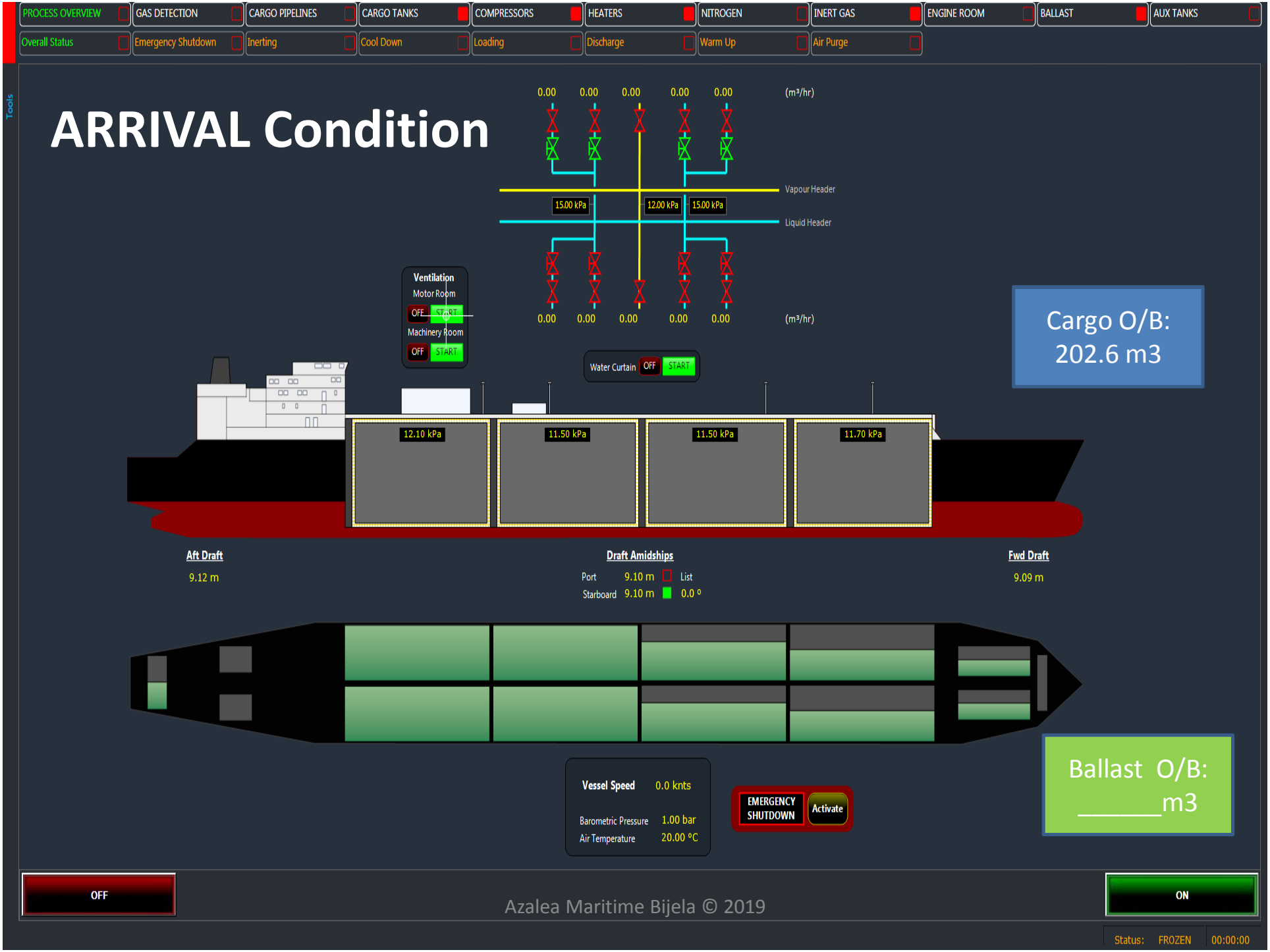
- Max Load by shore Rate = 12,000 m3/hr
- Each Shore Pump 1,000 m3/hr
- Total 12 pumps
- Ramp Up Diagram
- Both H/D ready
- Gas Burning permitted during operation (confirm with Terminal)

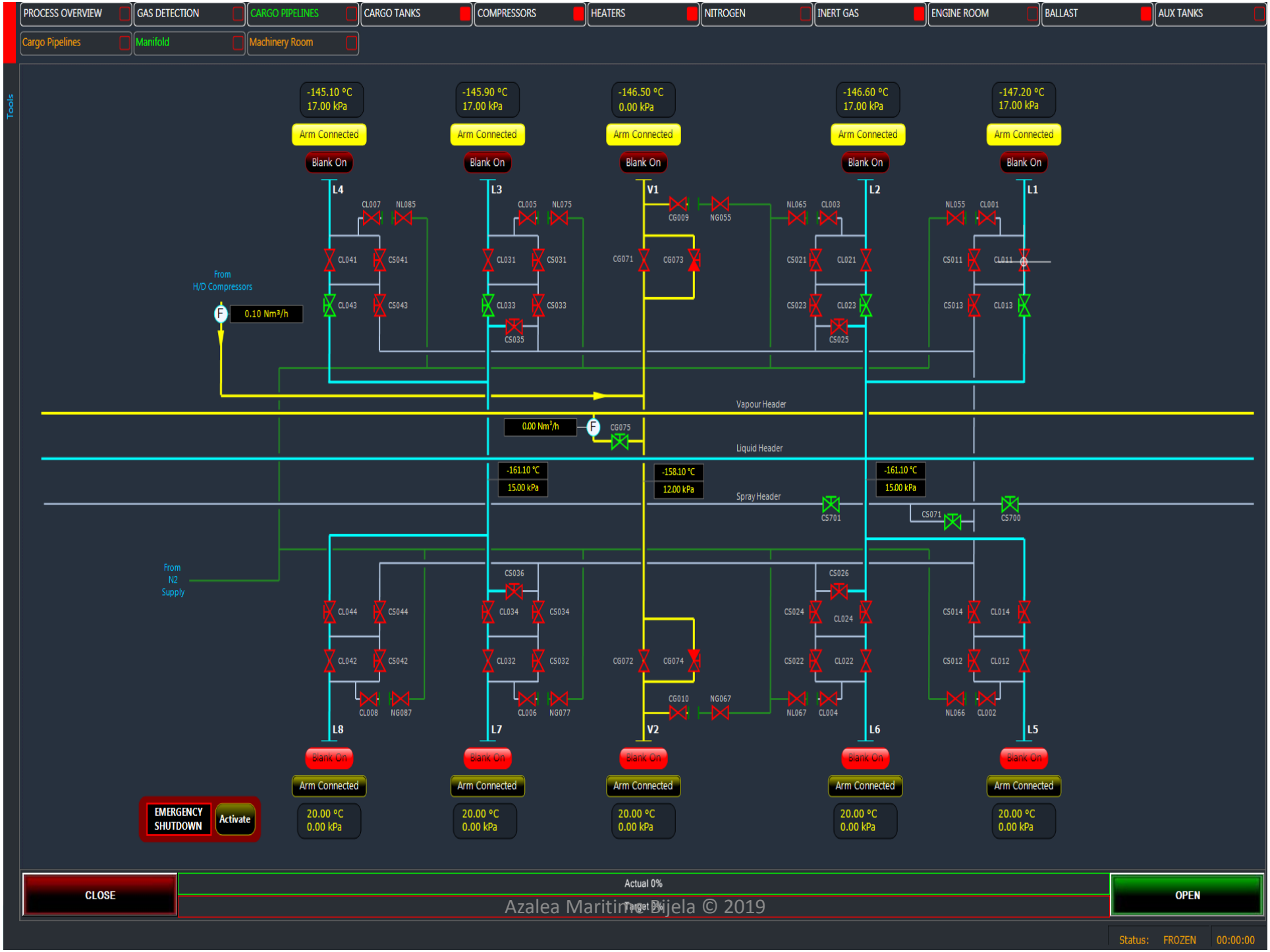
Max Rate (30 min) C/O

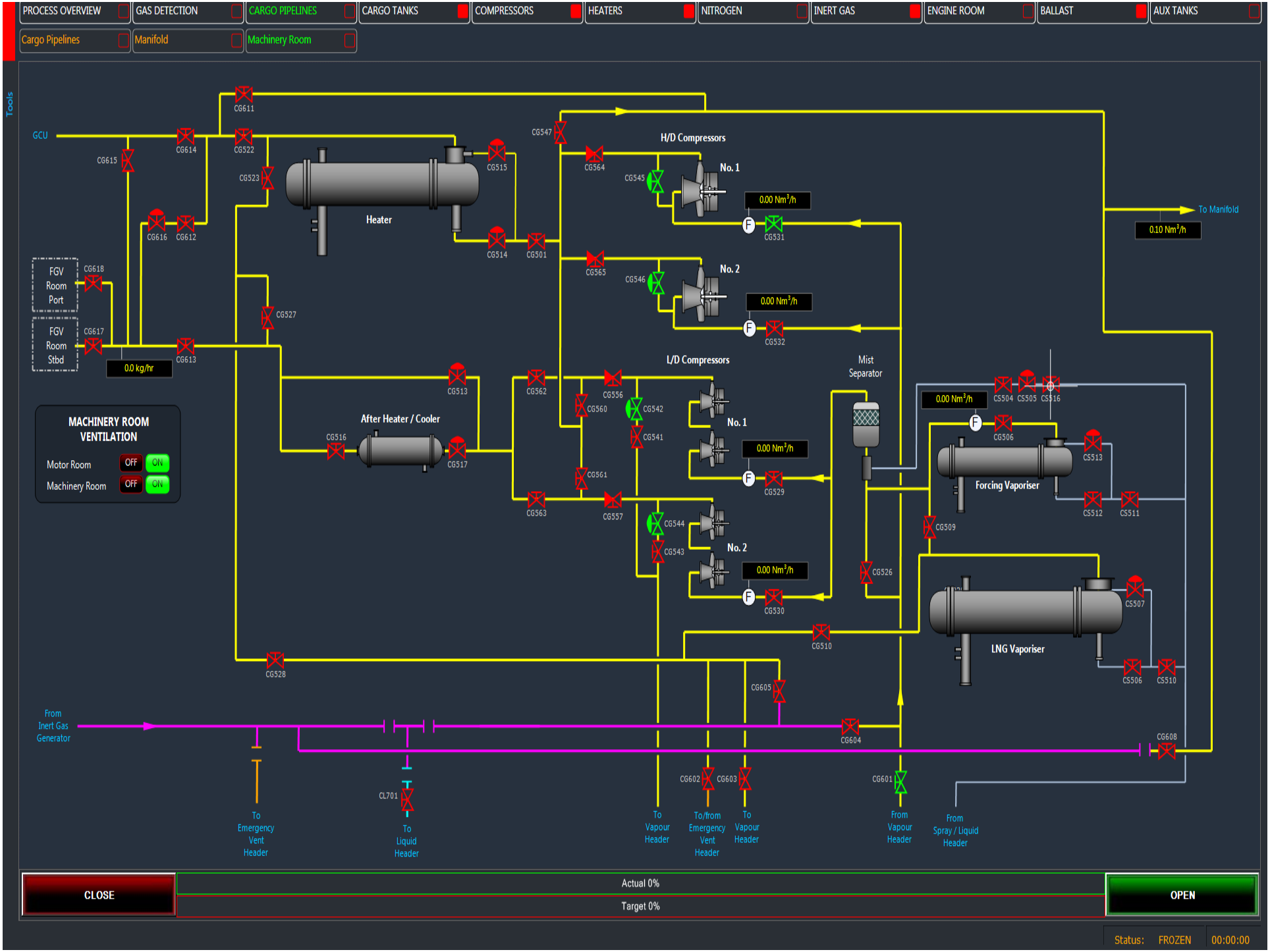
- Normal CCR and Deck watch
- C/O write down Order Book
- Final Checks by C/O
- Read and sign Order Book
- De-ballasting operation commence
- Transferring Con to OOW
- If Terminal request Gas Burning please start GCU
- Min Flow L\D compressor 2300 m3/hour
- Pre-cooler -120C required

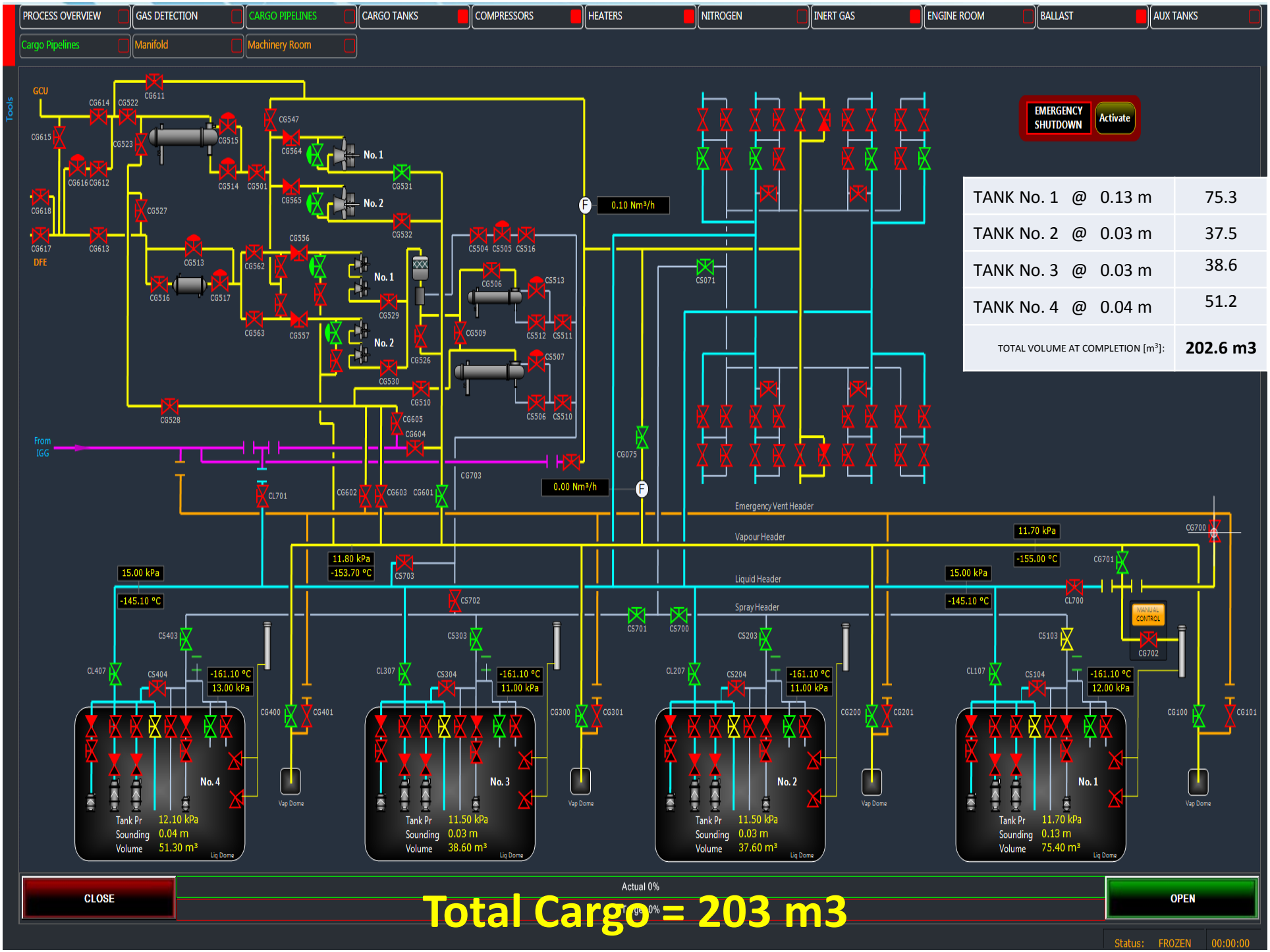
Max Rate (60 min) OOW

- OOW & G/E in CCR
- Follow the Plan
- Hourly Calculations
- Check List
- De-ballasting operation
- Hand Over Cargo Watch between Junior officers


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Overall Status
Emergency Shutdown
Inerting
Cool Down
Loading
Discharge
Warm Up
Air Purge
Tools
ARRIVAL Condition
0.00 0.00 0.00 0.00 0.00 (m³/hr)
Vapour Header
15.00 kPa
12.00 kPa
15.00 kPa
Liquid Header
0.00 0.00 0.00 0.00 0.00 (m³/hr)
Ventilation
Motor Room
OFF START
Machinery Room
OFF START
Water Curtain OFF START
Cargo O/B:
202.6 m3
12.10 kPa
11.50 kPa
11.50 kPa
11.70 kPa
Aft Draft
9.12 m
Draft Amidships
Port 9.10 m List
Starboard 9.10 m 0.0 °
Fwd Draft
9.09 m
Vessel Speed 0.0 knts
Barometric Pressure 1.00 bar
Air Temperature 20.00 °C
EMERGENCY SHUTDOWN
Activate
Ballast O/B:
_____m3
OFF
ON
Azalea Maritime Bijela © 2019
Status: FROZEN 00:00:00


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Pipelines
Manifold
Machinery Room
Tools
-145.10 °C
17.00 kPa
-145.90 °C
17.00 kPa
-146.50 °C
0.00 kPa
-146.60 °C
17.00 kPa
-147.20 °C
17.00 kPa
Arm Connected
Blank On
L4
L3
V1
L2
L1
CL007
NL085
CL005
NL075
CG009
NG055
NL065
CL003
NL055
CL001
CL041
CS041
CL031
CS031
CG071
CG073
CS021
CL021
CS011
CL011
From
H/D Compressors
0.10 Nm³/h
CL043
CS043
CL033
CS033
CS035
CS023
CL023
CS025
CS013
CL013
Vapour Header
0.00 Nm³/h
CG075
Liquid Header
-161.10 °C
15.00 kPa
-158.10 °C
12.00 kPa
-161.10 °C
15.00 kPa
Spray Header
CS701
CS071
CS700
From
N2
Supply
CS036
CS026
CL044
CS044
CL034
CS034
CS024
CL024
CS014
CL014
CL042
CS042
CL032
CS032
CG072
CG074
CS022
CL022
CS012
CL012
CG010
NG067
CL008
NG087
CL006
NG077
NL067
CL004
NL066
CL002
L8
L7
V2
L6
L5
EMERGENCY
SHUTDOWN
Activate
20.00 °C
0.00 kPa
CLOSE
Actual 0%
OPEN
Azalea Maritime Bijela © 2019
Status:
FROZEN
00:00:00

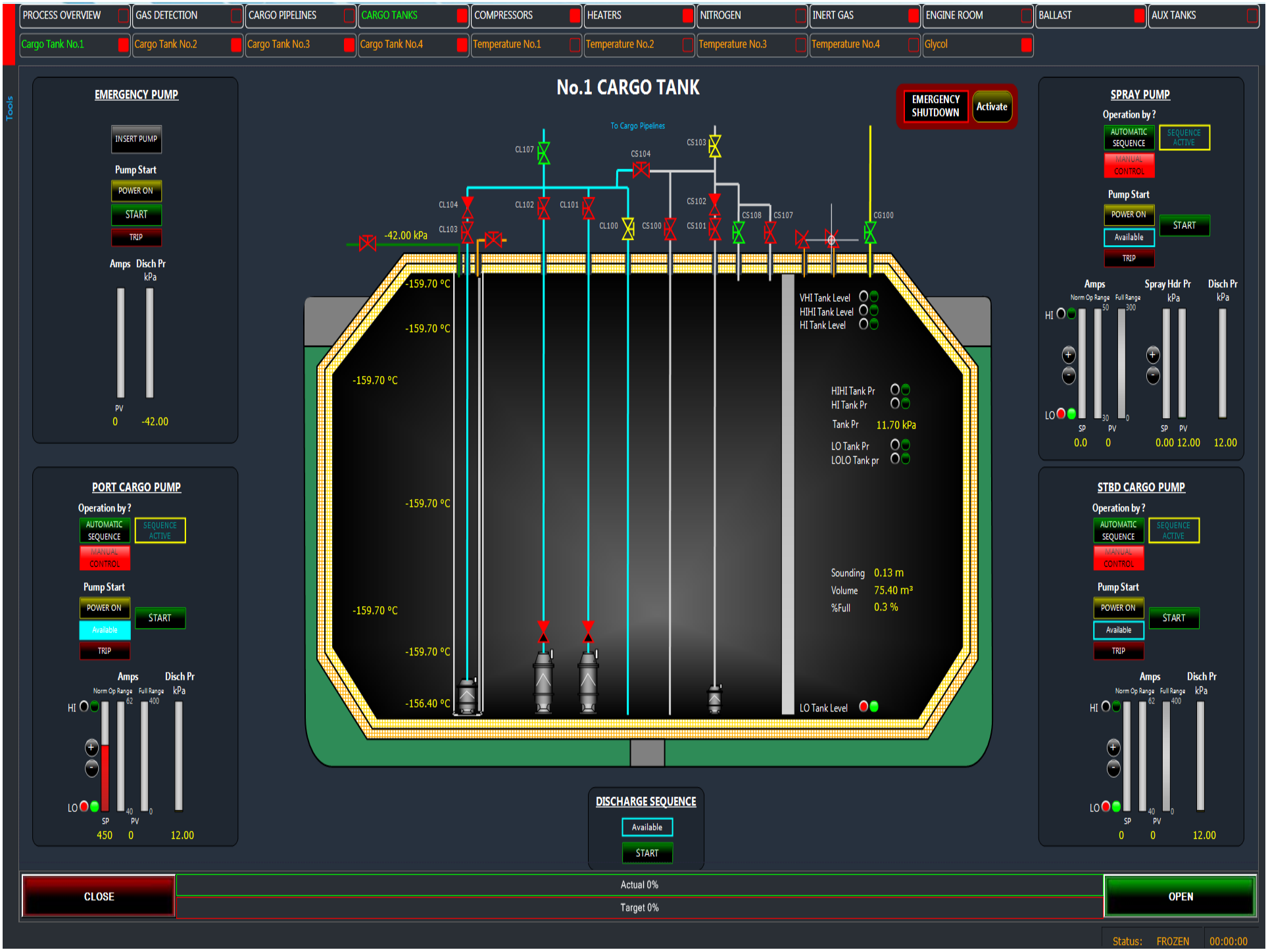

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Pipelines
Manifold
Machinery Room
Tools
GCU
CG611
CG614
CG522
CG615
CG523
CG515
Heater
CG514
CG501
CG616
CG612
FGV Room Port
FGV Room Stbd
CG618
CG617
CG613
0.0 kg/hr
CG527
CG513
CG562
CG516
After Heater / Cooler
CG517
CG563
CG528
MACHINERY ROOM VENTILATION
Motor Room
Machinery Room
OFF
ON
CG547
CG564
H/D Compressors
No. 1
CG545
0.00 Nm³/h
CG531
CG565
No. 2
CG546
0.00 Nm³/h
CG532
L/D Compressors
CG556
CG560
CG542
CG541
No. 1
0.00 Nm³/h
CG529
CG561
CG557
CG544
CG543
No. 2
0.00 Nm³/h
CG530
CG510
Mist Separator
CG526
CG509
0.00 Nm³/h
CS504
CS505
CS516
CG506
Forcing Vaporiser
CS513
CS512
CS511
LNG Vaporiser
CS507
CS506
CS510
To Manifold
0.10 Nm³/h
CG605
CG604
CG608
From Inert Gas Generator
CL701
CG602
CG603
CG601
To Emergency Vent Header
To Liquid Header
To Vapour Header
To/from Emergency Vent Header
To Vapour Header
From Vapour Header
From Spray / Liquid Header
CLOSE
Actual 0%
Target 0%
OPEN
Status: FROZEN
00:00:00



Total Cargo = 203 m3

Opening CTMS (CTMS Data Sheet)

Tank	CT 4	CT 3	CT 2	CT 1	Total
Tank Level (meters)	0.04	0.03	0.03	0.13	
Tank Volume (m3)	51.2	38.6	37.5	75.3	202.6
Temperature Liquid (°C)	158.70	158.10	158.00	159.56	158.61
Pressure kPa (G)	12.1	11.5	11.5	11.7	11.7
Pressure kPa (A)	113.4	112.8	112.8	113.0	113.0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GAS DETECTION
CARGO PIPELINES
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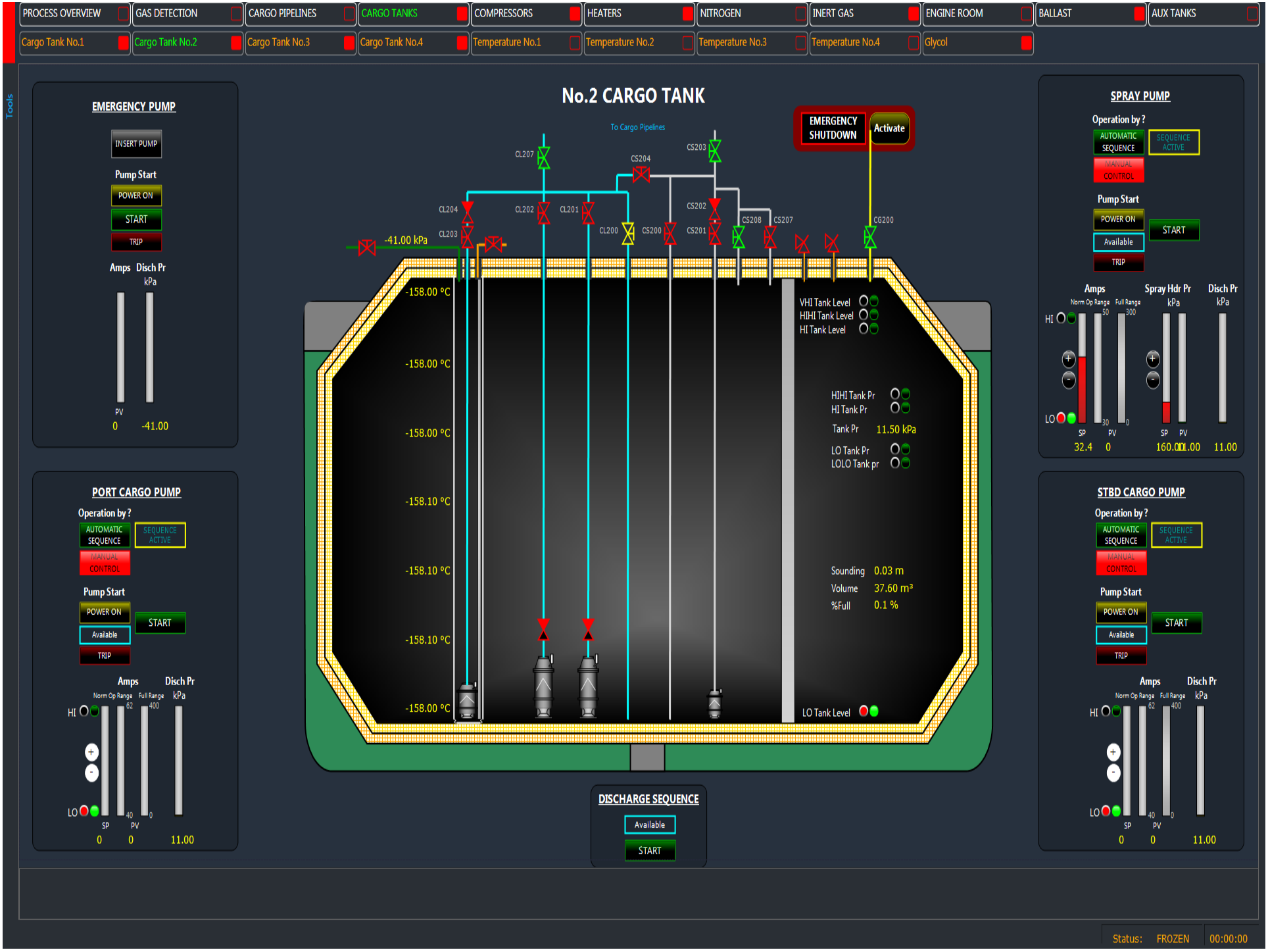
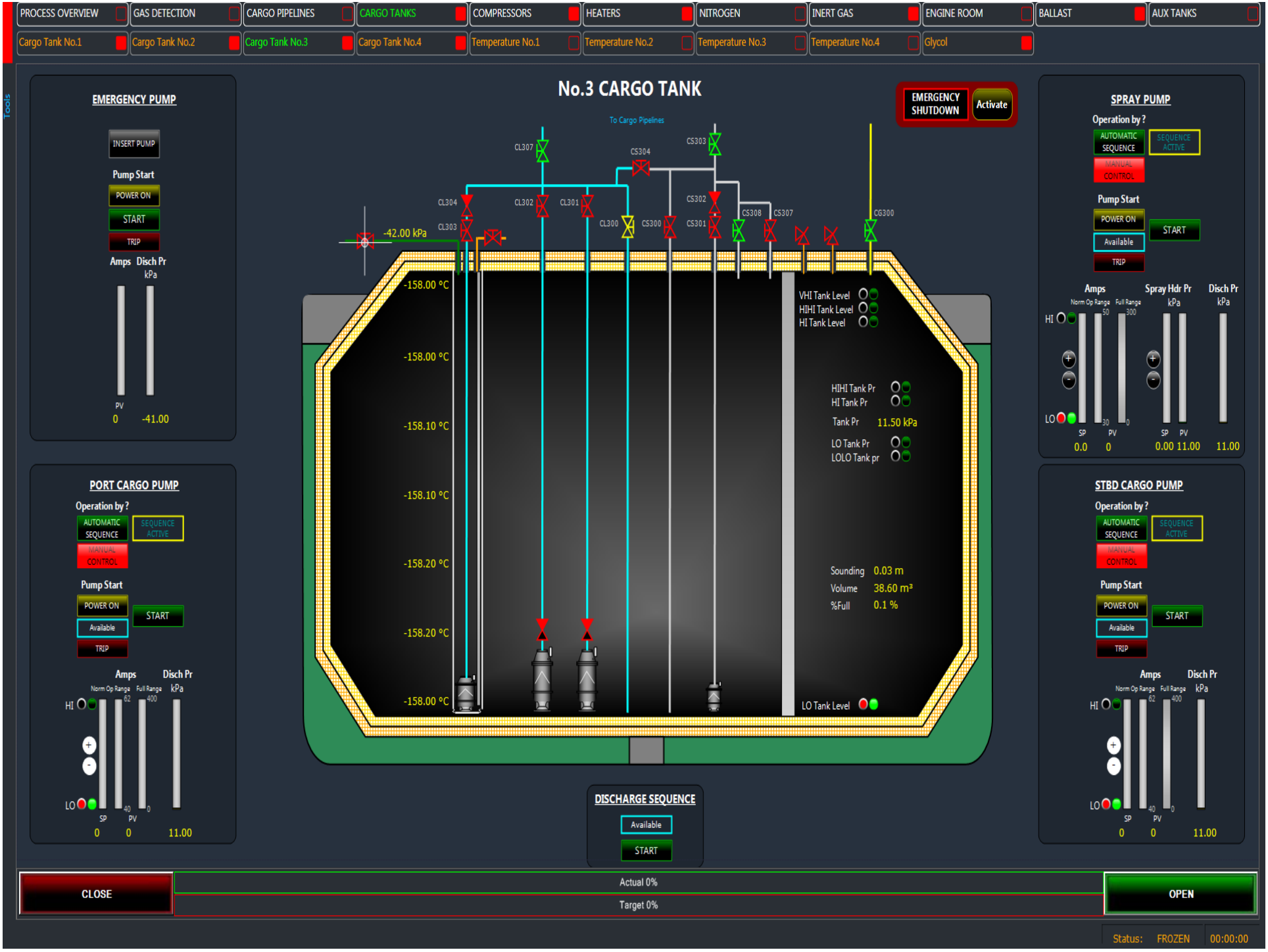
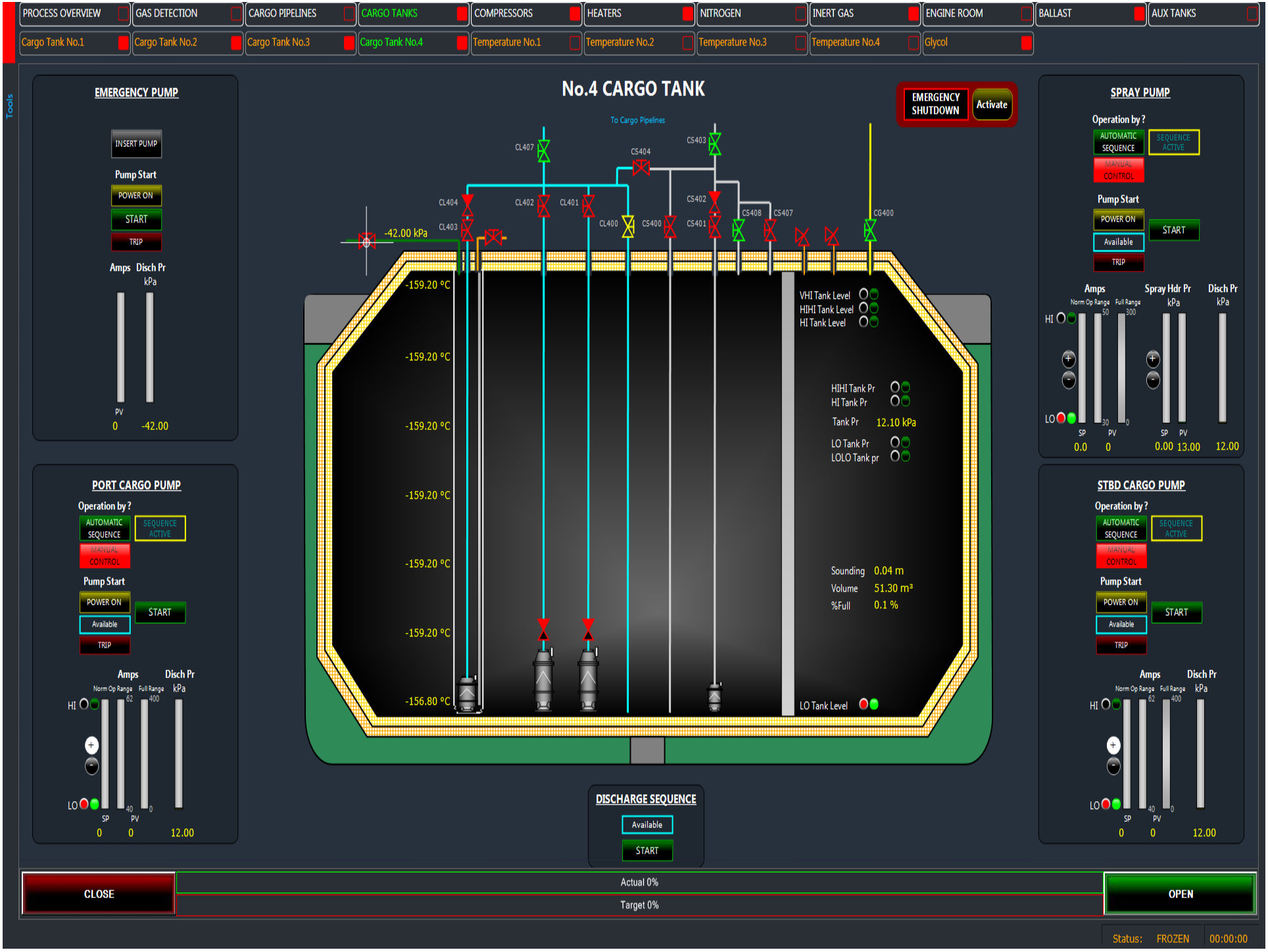
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-42.00
No.1 CARGO TANK
EMERGENCY SHUTDOWN
Activate
To Cargo Pipelines
CL107
CS103
CS104
CL104
CL103
CL102
CL101
CL100
CS100
CS102
CS101
CS108
CS107
CG100
-42.00 kPa
-159.70 °C
-159.70 °C
-159.70 °C
-159.70 °C
-159.70 °C
-156.40 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.70 kPa
LO Tank Pr
LOLO Tank pr
Sounding
0.13 m
Volume
75.40 m³
%Full
0.3 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
0.0
0
0.00
12.00
12.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
450
0
12.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
12.00
DISCHARGE SEQUENCE
Available
START
CLOSE
Actual 0%
Target 0%
OPEN
Status:
FROZEN
00:00:00

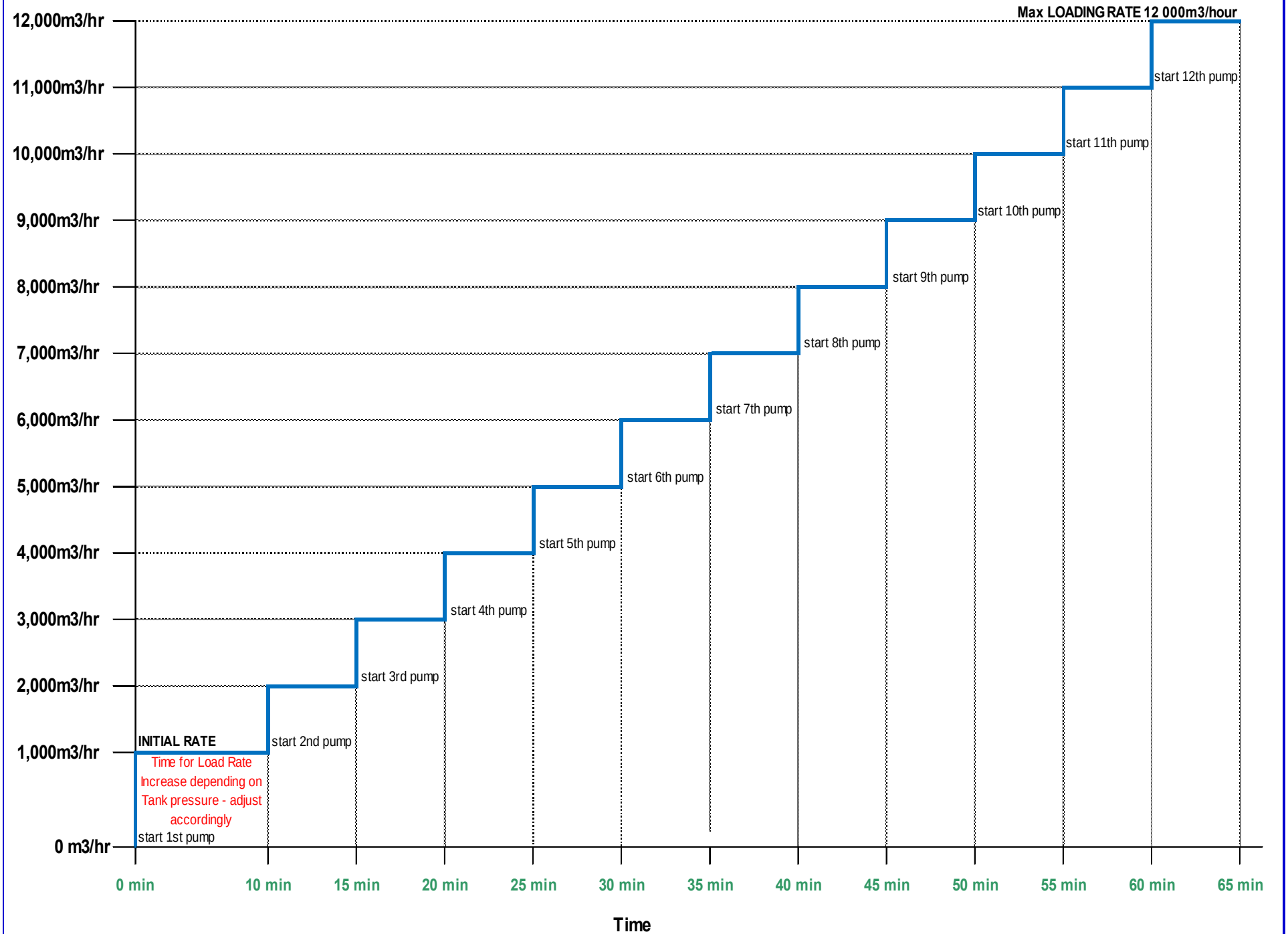

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-41.00
No.2 CARGO TANK
To Cargo Pipelines
EMERGENCY SHUTDOWN
Activate
CL207
CS204
CS203
CL204
CL202
CL201
CS202
CS208
CS207
CG200
CL203
-41.00 kPa
CL200
CS200
CS201
-158.00 °C
-158.00 °C
-158.00 °C
-158.10 °C
-158.10 °C
-158.00 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.50 kPa
LO Tank Pr
LOLO Tank pr
Sounding
0.03 m
Volume
37.60 m³
%Full
0.1 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
50
300
30
0
32.4
0
160.00
11.00
11.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
62
400
40
0
0
0
11.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
62
400
40
0
0
0
11.00
DISCHARGE SEQUENCE
Available
START
Status:
FROZEN
00:00:00


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-41.00
No.3 CARGO TANK
EMERGENCY SHUTDOWN
Activate
To Cargo Pipelines
CL307
CS304
CS303
CL304
CL302
CL301
CS302
CS308
CS307
CL303
CL300
CS300
CS301
CG300
-42.00 kPa
-158.00 °C
-158.00 °C
-158.10 °C
-158.10 °C
-158.20 °C
-158.20 °C
-158.00 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.50 kPa
LO Tank Pr
LOLO Tank pr
Sounding
0.03 m
Volume
38.60 m³
%Full
0.1 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
50
300
HI
LO
SP
PV
30
0
0.0
0
Spray Hdr Pr
kPa
0.00
11.00
Disch Pr
kPa
11.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
62
400
HI
LO
SP
PV
40
0
0
0
Disch Pr
kPa
11.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
62
400
HI
LO
SP
PV
40
0
0
0
Disch Pr
kPa
11.00
DISCHARGE SEQUENCE
Available
START
CLOSE
Actual 0%
Target 0%
OPEN
Status:
FROZEN
00:00:00


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-42.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
12.00
No.4 CARGO TANK
EMERGENCY SHUTDOWN
Activate
To Cargo Pipelines
CL407
CS404
CS403
CL404
CL402
CL401
CS402
CS408
CS407
CG400
CL403
-42.00 kPa
CL400
CS400
CS401
-159.20 °C
-159.20 °C
-159.20 °C
-159.20 °C
-159.20 °C
-159.20 °C
-156.80 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
12.10 kPa
LO Tank Pr
LOLO Tank pr
Sounding
0.04 m
Volume
51.30 m³
%Full
0.1 %
LO Tank Level
DISCHARGE SEQUENCE
Available
START
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
Disch Pr
kPa
HI
LO
SP
PV
0.0
0
0.00
13.00
12.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
12.00
CLOSE
Actual 0%
Target 0%
OPEN
Status:
FROZEN
00:00:00

Water Ballast Quantity at Arrival Laod Port		
Water Ballast Tanks	**Sounding (m)**	**Volume (m3)**
FPT	0.00 m	0 m3
Frwd Port	15.26 m	1,897 m3
Frwd Stbd	15.26 m	1,897 m3
No. 1 Port	12.06 m	4,832 m3
No.1 Stbd	12.06 m	4,832 m3
No. 2 Port	12.76 m	4,566 m3
No. 2 Stbd	12.76 m	4,566 m3
No. 3 Port	25.93 m	6,427 m3
No. 3 Stbd	25.93 m	6,427 m3
No. 4 Port	25.95 m	6,083 m3
No. 4 Stbd	25.95 m	6,083 m3
E/R Port	0.00 m	0 m3
E/R Stbd	0.00 m	0 m3
APT	15.04 m	1,461 m3
	Total:	**49,068 m3**
		50,378 MT

LOADING RATE RAMP UP SHEET



LOAD PORT TIME SHEDULE

Times on this schedule are for reference only, and will be discussed on Ship Shore Meeting.

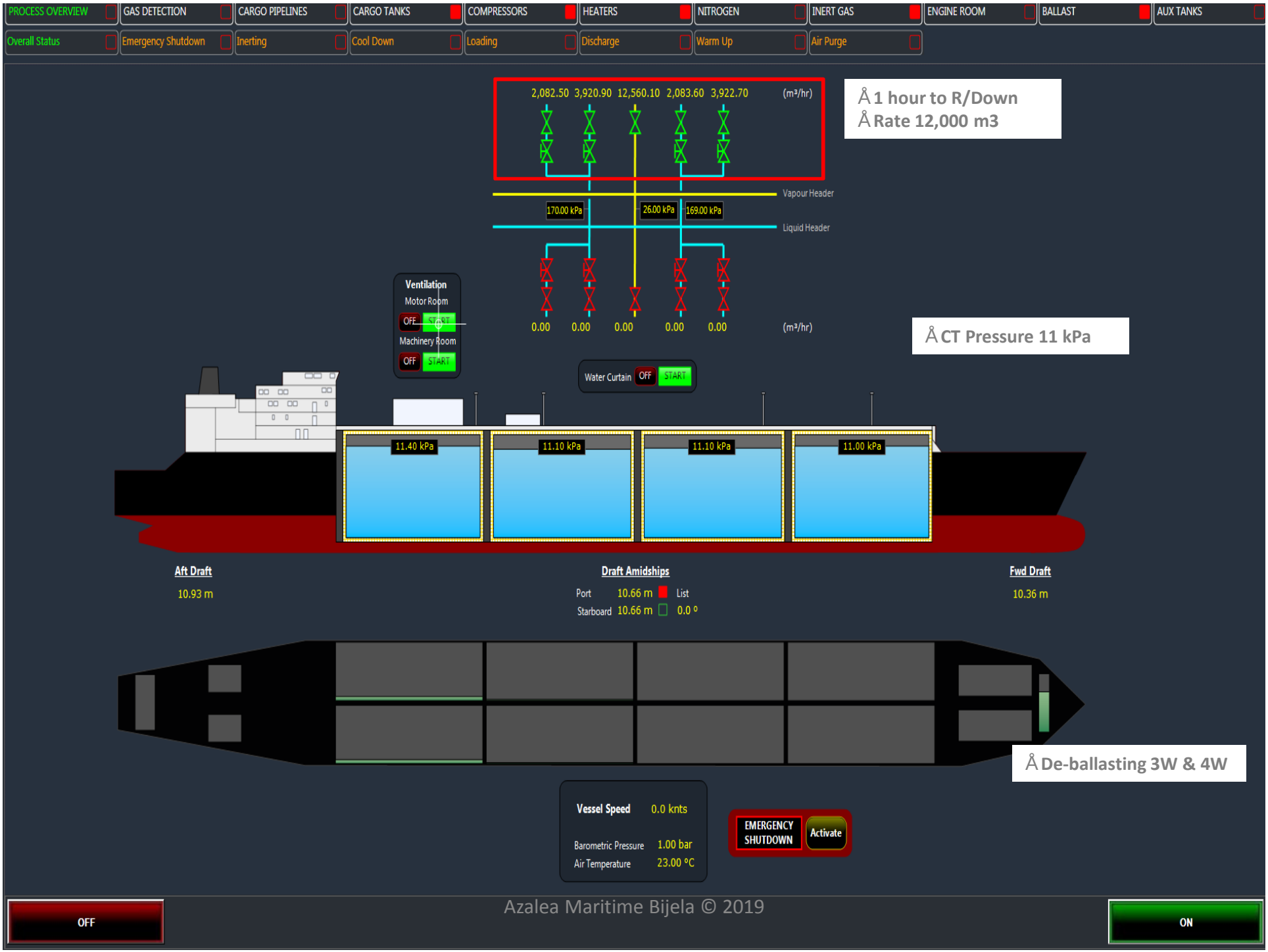
Schedule Time		Actual Time		Description and Remarks	
06:00				Heel O/B	212 m3
06:00		06:00		NOR tendered	
06:00		06:00		POB	
07:00	07:30	07:00	07:30	First Line – All Fast	
07:30	08:00	07:30	08:00	Pre-Operational Meeting	
07:30	08:00	07:30	08:00	Arms Connection and Purging	
08:00	08:15	08:00	08:15	Opening gauging	Gas master shut
08:15	08:30	08:15	08:30	Warm ESD Trip Test	Ship initiate
08:30	09:30	08:30	09:30	Arm Cool down	30 min
09:30	10:00			Final preparation for Loading	Check List
10:00	10:10			Commence Loading	Initial rate 1,000 m3/hr
10:10	11:00			Rate Up	R/U diagram
11:00	11:30			Full rate checks	C/O
11:30	12:30			Bulk Loading	OOW
17:00	17:30			Ship's manifold draining	
				Ship's Manifold N2 purging & Shore Side Draining	
				Final gauging	
				Arms Disconnection	
20:30				Sailing	

Loading Exercise = 2.0 hours

FINAL Preparations (30 min) OOW	FINAL Preparations (30 min) CO	Ramp Down (60 min)	Preparation for Departure
ÅOOW & G/E in CCR ÅFollow the Plan ÅHourly Calculations ÅCheck List ÅDe-ballasting operation ÅHand Over Cargo Watch between Junior officers	ÅTransferring Command to C/O ÅFinal Checks by C/O ÅDe-ballasting operation ÅSet CCR and Deck Watch Å15 min Notice required to Shore for R/D Å2 x WBP running for two educators ï Educting ballast tanks 1W	ÅCommence Ramp down operation ÅFollow R/D diagram ÅObserve Cargo Quantity to Load Å Ship's Stop @ 98.5% ÅComplete Educting all ballast tanks except FPT as per Loading Plan	ÅSecure Water Ballast System ÅDisconnect Liquid Arms after draining and purging ÅBoil Off Management (start GCU) ÅDisconnect Vapour Arm ÅLine Up for Sea Passage

RATE	12,000	Start Exercise 1c (app. 1hour before Ramp Down)				
	Cargo Tank	CT 4	CT 3	CT 2	CT 1	Total
	Tank Volume (m3) / Sdg / %	43,915 m3 (24.36m) (89.0 %)	42,710 m3 (23.53) (86.6 %)	43,284 m3 (23.92) (87.7 %)	22,587 m3 (25.66 m) (89.6 %)	152,496
	Req. Rate per tank (m3/h)	3,456 m3/hr	3,361 m3/hr	3,406 m3/hr	1,777 m3/hr	12,001 m3/hr
	Time till rate down	60 min	60 min	60 min	60 min	60 min

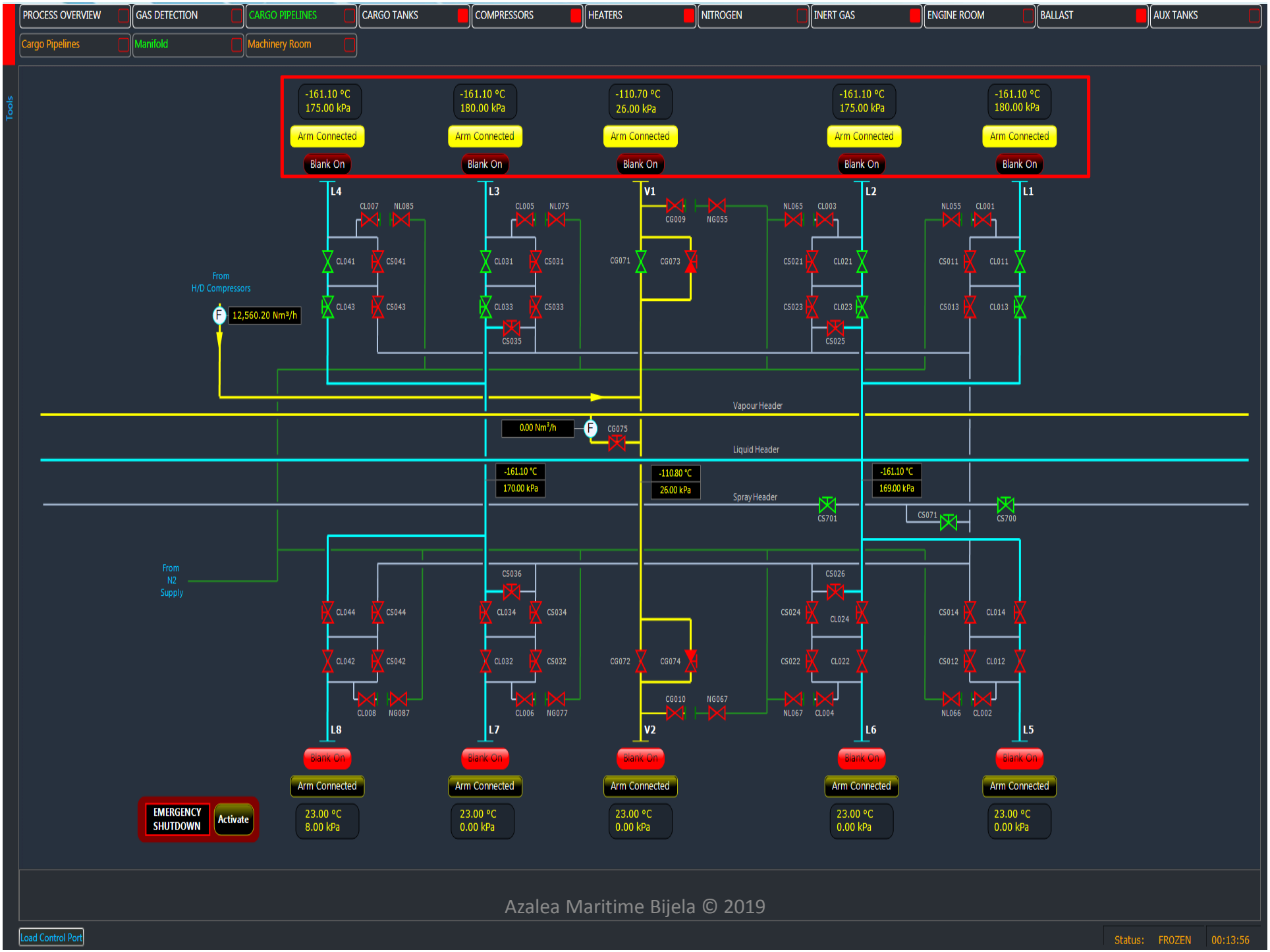
MIN	Shore Pumps	RATE m3/h	NOTES	VOL (m3)	SDG (m)	VOL (m3)	SDG (m)	VOL (m3)	SDG (m)	VOL (m3)	SDG (m)	TOTAL
60	STOP 12	12,000	Start R/D	47,371 m3	(27.28 m) (96.5%)	46,071 m3	(26.38 m) (94.4%)	46,690 m3	(26.81 m) (95.4 %)	24,365 m3	(27.90 m) (97.1%)	164,497 m3
55	STOP 11	11,000		47,621 m3	(27.45 m) (96.9%)	46,321 m3	(26.54 m) (94.8%)	46,940 m3	(26.97 m) (95.8 %)	24,615 m3	(28.15 m) (97.9%)	165,497 m3
50	STOP 10	10,000	CT 1 compl	47,850 m3	(27.59 m) (97.3%)	46,550 m3	(26.67 m) (95.1%)	47,169 m3	(27.11 m) (96.2 %)	24,844 m3	(28.37 m) (98.5%)	166,413 m3
45	STOP 9	9,000		48,128 m3	(27.79 m) (97.7%)	46,758 m3	(26.81 m) (95.4%)	47,378 m3	(27.26 m) (96.5 %)	SHUT No. 1 CT		167,108 m3
40	STOP 8	8,000		48,378 m3	(27.99 m) (98.1%)	47,008 m3	(26.99 m) (95.9%)	47,628 m3	(27.45 m) (96.9 %)			167,858 m3
35	STOP 7	7,000	CT4 compl	48,600 m3	(28.16 m) (98.5%)	47,231 m3	(27.15 m) (96.2%)	47,850 m3	(27.61 m) (97.3 %)			168,525 m3
30	STOP 6	6,000		SHUT No. 4 CT		47,425 m3	(27.28 m) (96.%)	48,142 m3	(27.81 m) (97.7 %)			169,011 m3
25	STOP 5	5,000				47,675 m3	(27.47 m) (97.0%)	48,392 m3	(28.01 m) (98.2 %)			169,511 m3
20	STOP 4	4,000	CT 2 compl			47,883 m3	(27.61 m) (97.3%)	48,600 m3	(28.16 m) (98.5 %)			169,927 m3
15	STOP 3	3,000				48,217 m3	(24.81 m) (97.7%)	SHUT No. 2 CT				170,261 m3
10	STOP 2	2,000				48,383 m3	(27.91 m) (98.0%)					170,427 m3
5		1,000				48,467 m3	(28.01 m) (98.2%)					170,511 m3
0	STOP 1	0	CT 3 compl			48,550 m3	(28.11 m) (98.4%)	STOP LOADING - Kepp Filing valve CL-300 Open				170,594 m3
						50 m3	allow for draining					
Final	SHUT Liquid Manifold Manual Valves					48,600 m3	(28.16 m) (98.5 %)					170,644 m3



Å 1 hour to R/Down
Å Rate 12,000 m3

Å CT Pressure 11 kPa

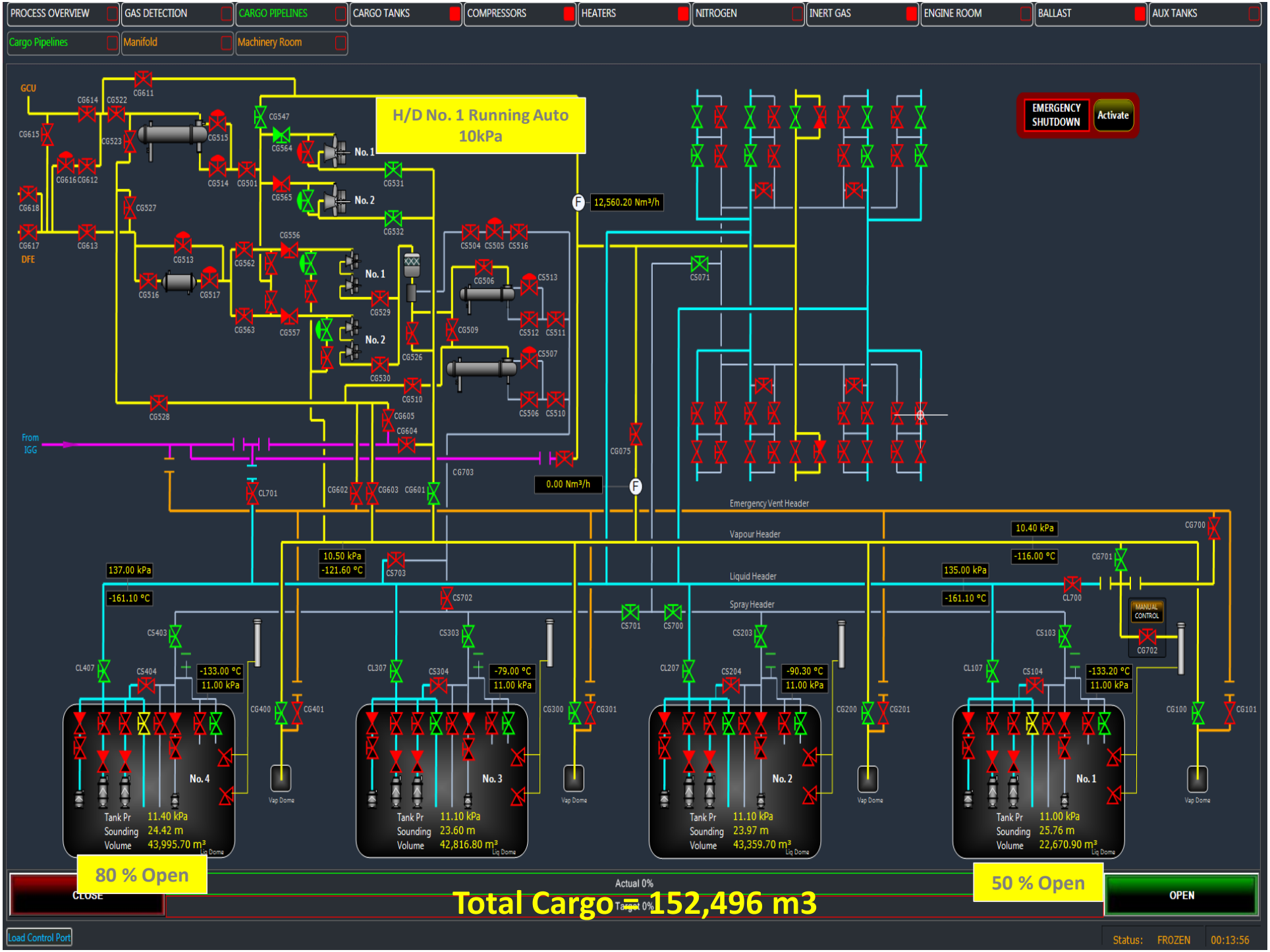
Å De-ballasting 3W & 4W

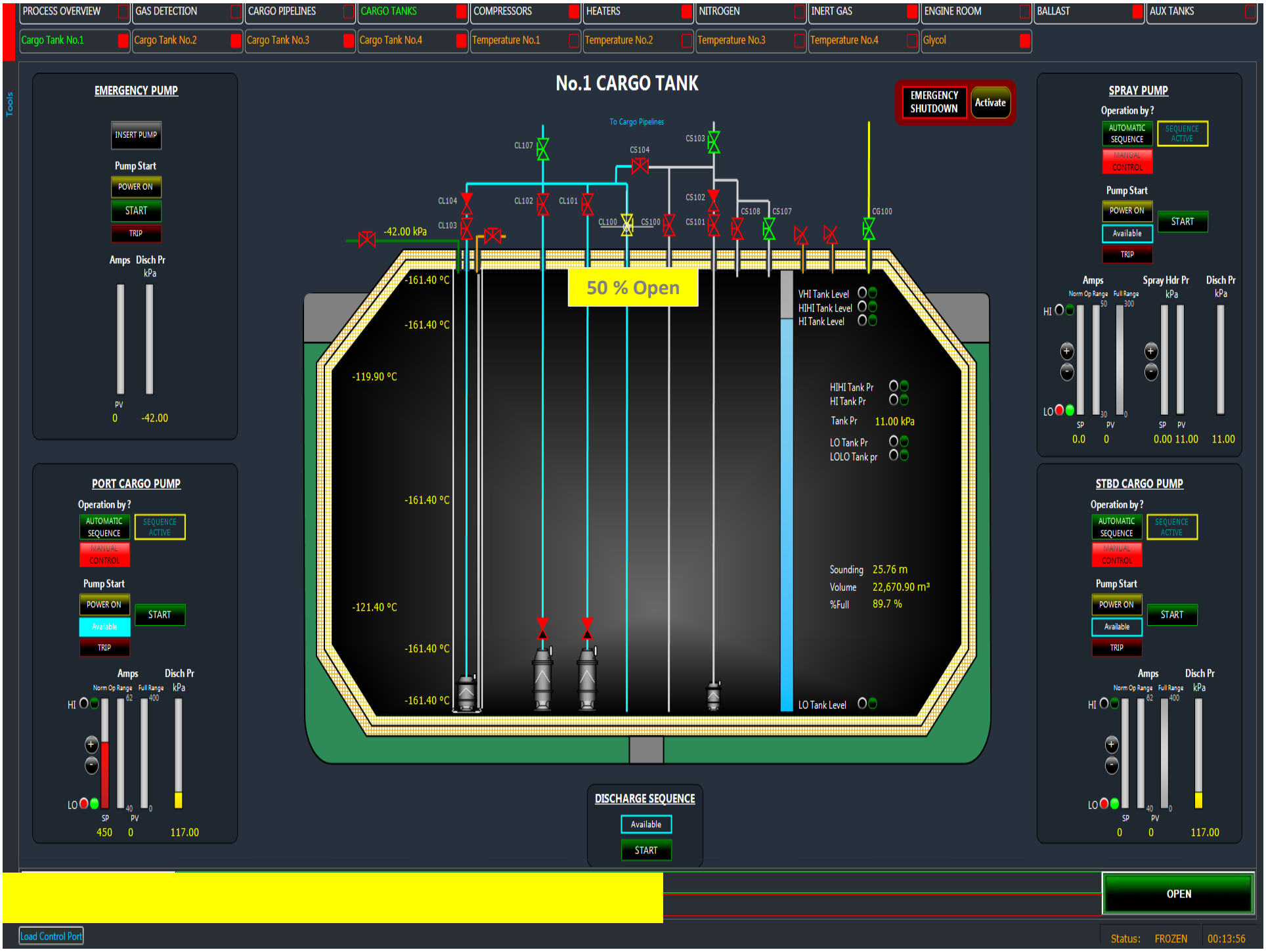

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Pipelines
Manifold
Machinery Room
Tools
-161.10 °C
175.00 kPa
-161.10 °C
180.00 kPa
-110.70 °C
26.00 kPa
-161.10 °C
175.00 kPa
-161.10 °C
180.00 kPa
Arm Connected
Blank On
L4
L3
V1
L2
L1
CL007
NL085
CL005
NL075
CG009
NG055
NL065
CL003
NL055
CL001
CL041
CS041
CL031
CS031
CG071
CG073
CS021
CL021
CS011
CL011
CL043
CS043
CL033
CS033
CS023
CL023
CS013
CL013
CS035
CS025
From
H/D Compressors
12,560.20 Nm³/h
Vapour Header
0.00 Nm³/h
CG075
Liquid Header
-161.10 °C
170.00 kPa
-110.80 °C
26.00 kPa
-161.10 °C
169.00 kPa
Spray Header
CS701
CS071
CS700
From
N2
Supply
CS036
CS026
CL044
CS044
CL034
CS034
CS024
CL024
CS014
CL014
CL042
CS042
CL032
CS032
CG072
CG074
CS022
CL022
CS012
CL012
CG010
NG067
CL008
NG087
CL006
NG077
NL067
CL004
NL066
CL002
L8
L7
V2
L6
L5
EMERGENCY
SHUTDOWN
Activate
23.00 °C
8.00 kPa
23.00 °C
0.00 kPa
23.00 °C
0.00 kPa
23.00 °C
0.00 kPa
23.00 °C
0.00 kPa
Azalea Maritime Bijela © 2019
Load Control Port
Status:
FROZEN
00:13:56

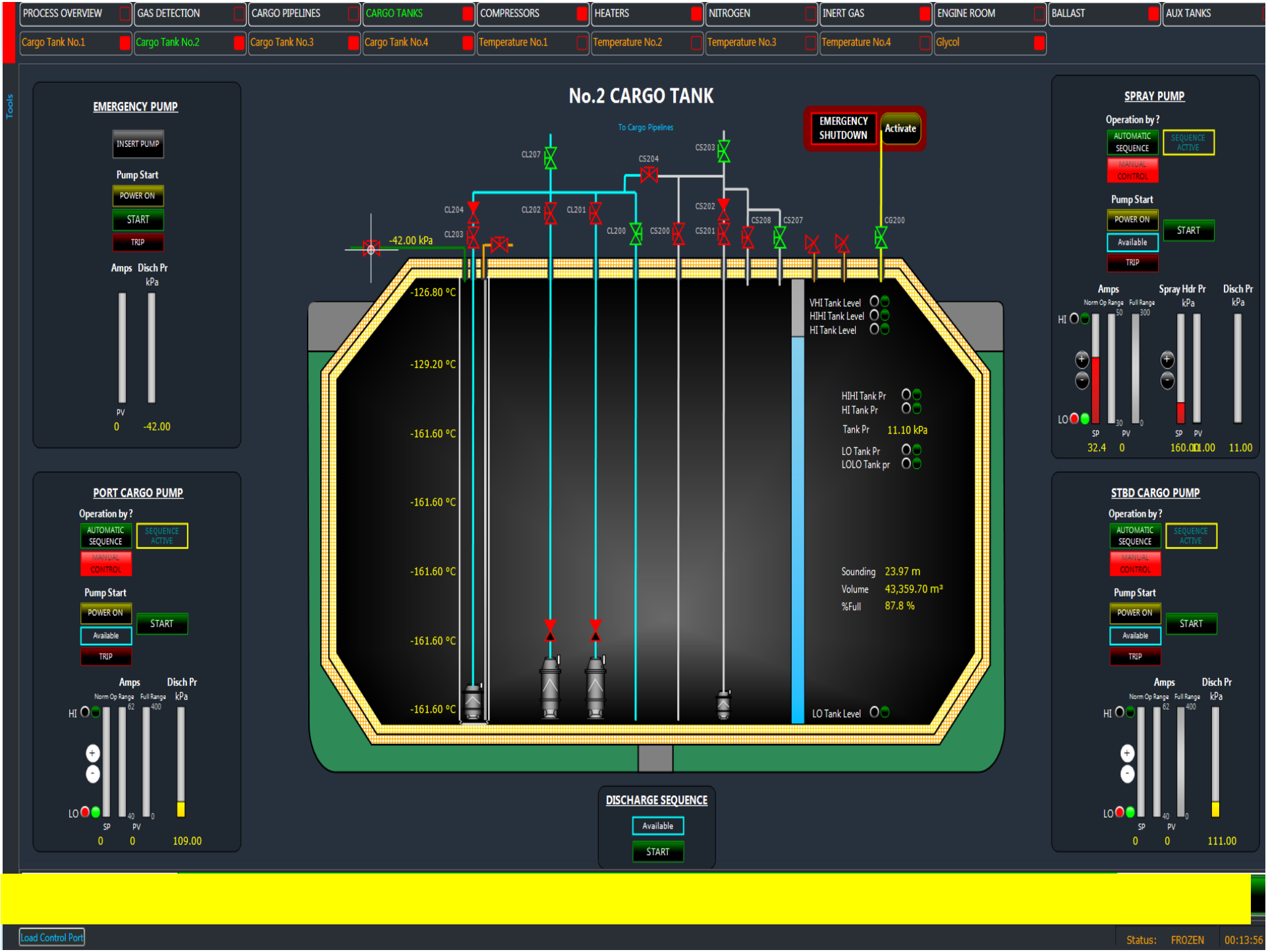

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Overall Status
Emergency Shutdown
Inerting
Cool Down
Loading
Discharge
Warm Up
Air Purge
Tools
EMERGENCY SHUTDOWN SYSTEM
SHORE CONNECTION
WIRELESS
CONNECTED
OPTICAL
CONNECTED
PNEUMATIC
CONNECTED
CAUSE
MANUAL SWITCH
EXTREME HIGH TANK LEVEL
Very High Level
Extreme High Level
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Override
VERY LOW VAPOUR HEADER PRESSURE
LOW CONTROL AIR PRESSURE
LOW HYDRAULIC SYS. PRESSURE
ELECTRICAL POWER FAILURE
FIRE
SHORE ACTIVATION
EMERGENCY SHUTDOWN
Activate
OFF
ON
Ballast Tanks
Cargo Tanks
Status:
FROZEN
00:09:49

OIL & FW TANKS

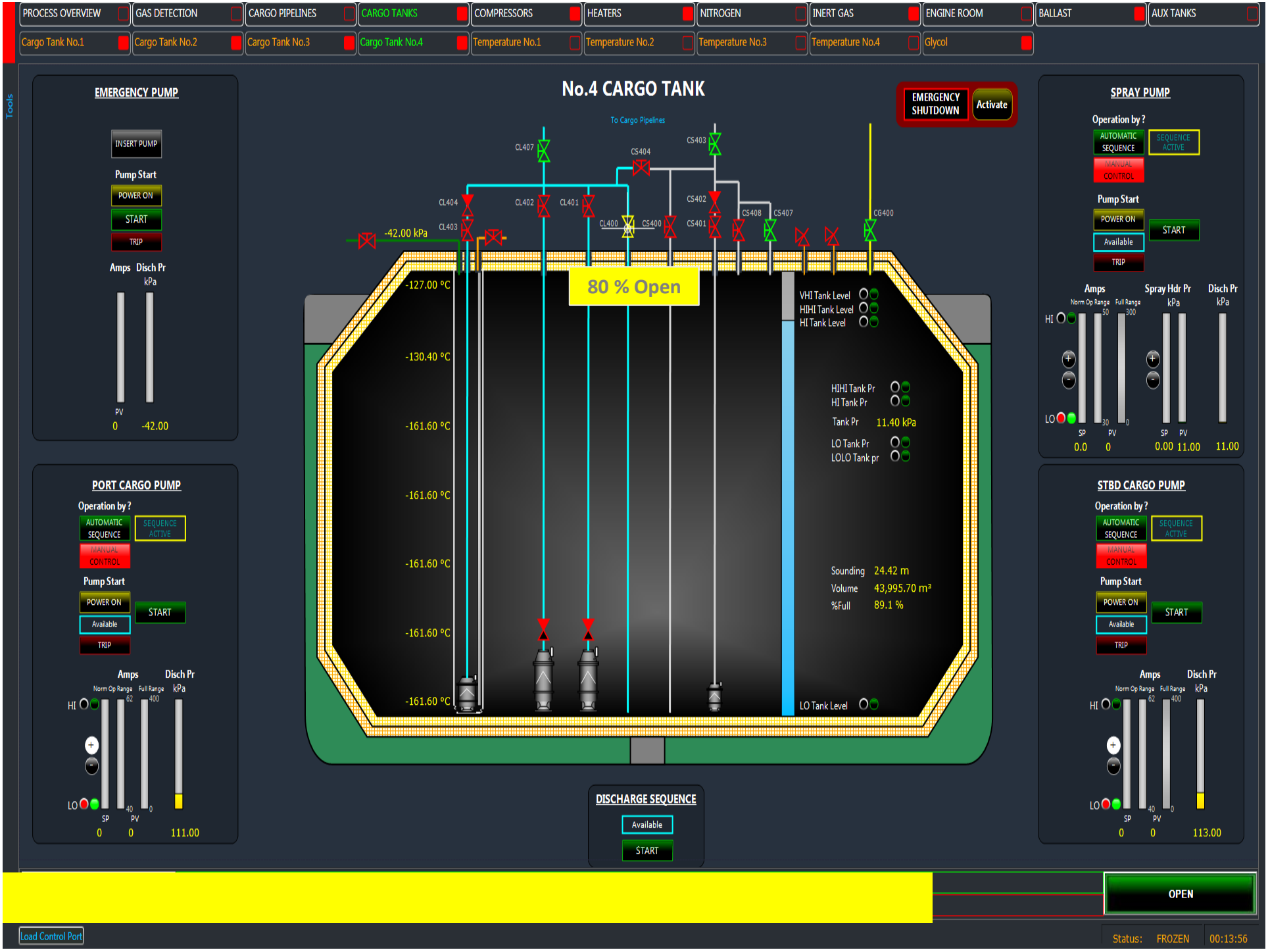
	% Full	Sounding (m)		% Full	Sounding (m)
No. 1 HFO (Fwd)	90	7.43	D.O. Storage (S)	90	4.91
No. 2 HFO (P)	90	7.43	D.O. Sett (S)	90	4.91
No. 2 HFO (S)	90	7.43	Gas Oil (P)	90	0.00
No. 1 HFO Sett (S)	90	7.43			
No. 2 HFO Sett (S)	90	4.93	Main L.O. Storage (S)	90	0.00
Low Sulpher HFO (P)	90	4.93	Main L.O. Setting (S)	90	0.00
			Main L.O. Sump (C)	90	0.00
Dist Water (P)	0	0.00	Main L.O. Gravity (S)	0	0.00
Dist Water (S)	0	0.00	G/E L.O. Storage (S)	0	0.00
Fresh Water (P)	0	0.00	G/E L.O. Setting (S)	0	0.00
Fresh Water (S)	0	0.00	G/T L.O. Storage (S)	0	43.01
			G/T L.O. Setting (S)	0	0.00
HFO Overflow (P)	0	0.00			
Cooling Water	0	0.00			

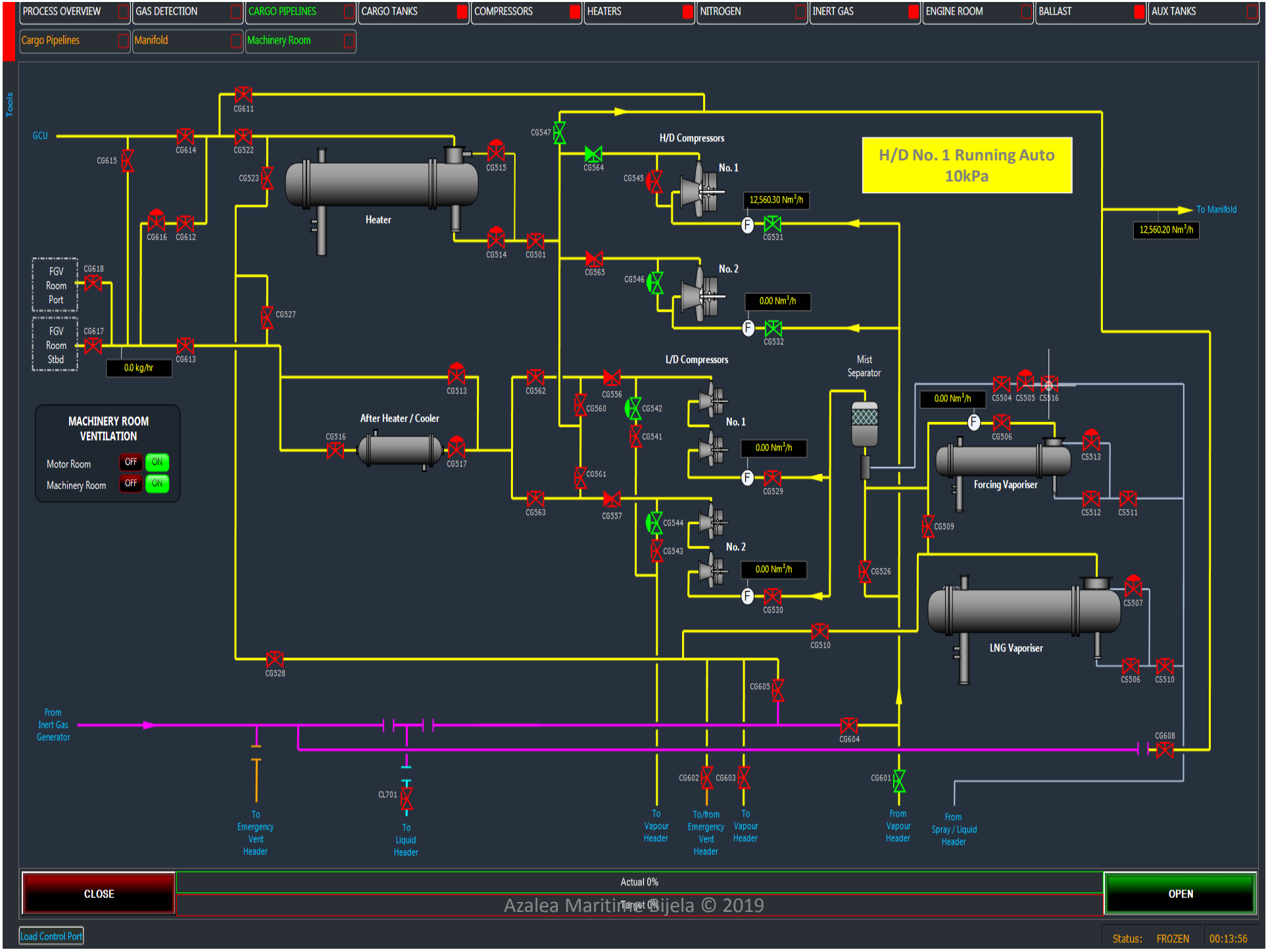

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Pipelines
Manifold
Machinery Room
H/D No. 1 Running Auto
10kPa
EMERGENCY SHUTDOWN
Activate
12,560.20 Nm³/h
0.00 Nm³/h
From IGG
Emergency Vent Header
Vapour Header
Liquid Header
Spray Header
10.40 kPa
-116.00 °C
10.50 kPa
-121.60 °C
137.00 kPa
-161.10 °C
135.00 kPa
-161.10 °C
MANUAL CONTROL
-133.00 °C
11.00 kPa
-79.00 °C
11.00 kPa
-90.30 °C
11.00 kPa
-133.20 °C
11.00 kPa
No. 4
Tank Pr 11.40 kPa
Sounding 24.42 m
Volume 43,995.70 m³
No. 3
Tank Pr 11.10 kPa
Sounding 23.60 m
Volume 42,816.80 m³
No. 2
Tank Pr 11.10 kPa
Sounding 23.97 m
Volume 43,359.70 m³
No. 1
Tank Pr 11.00 kPa
Sounding 25.76 m
Volume 22,670.90 m³
80 % Open
50 % Open
CLOSE
OPEN
Actual 0%
Target 0%
Total Cargo = 152,496 m3
Load Control Port
Status: FROZEN
00:13:56

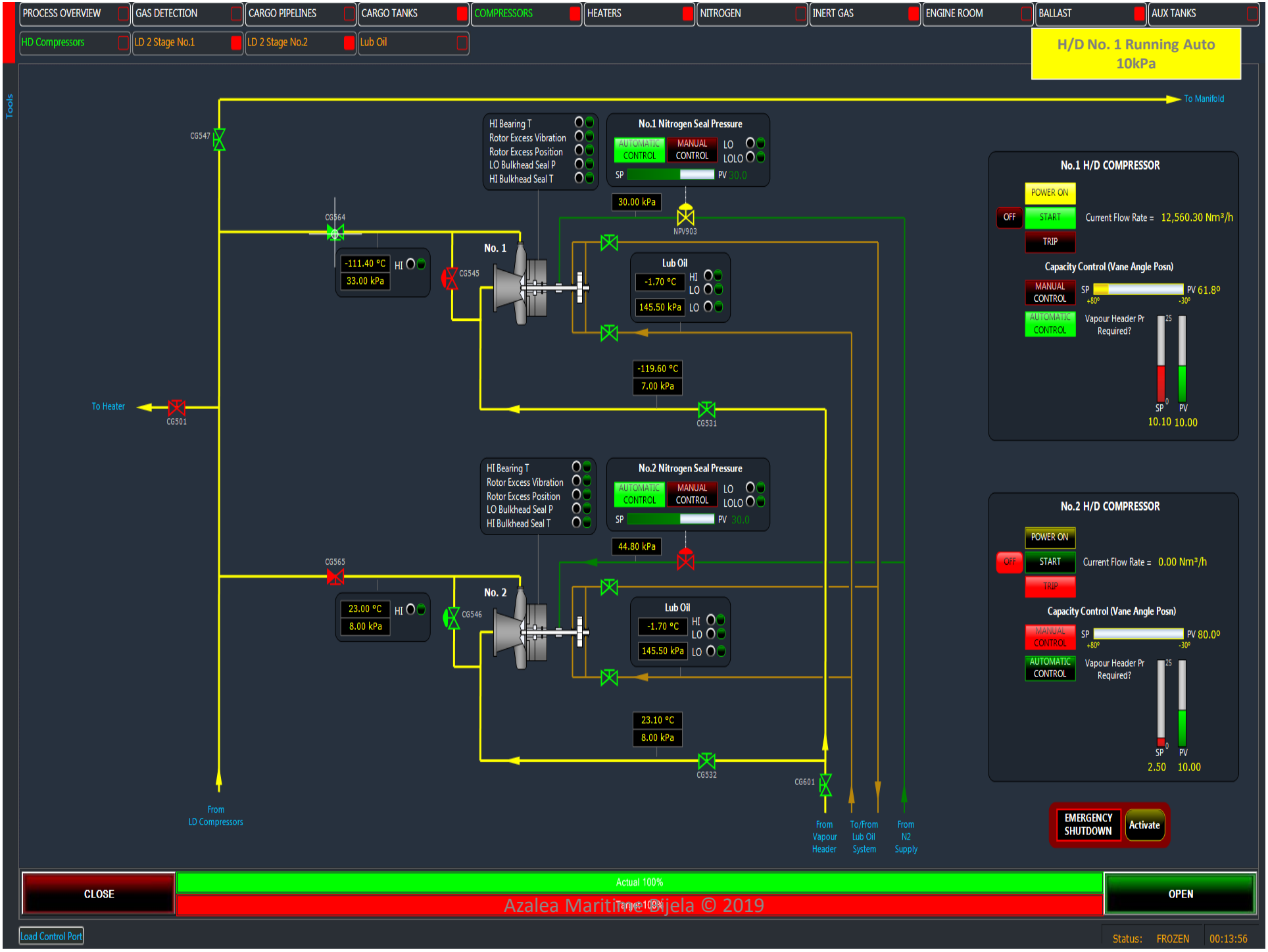

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
No.1 CARGO TANK
EMERGENCY SHUTDOWN
Activate
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-42.00
To Cargo Pipelines
CL107
CS104
CS103
CL104
CL103
CL102
CL101
CL100
CS100
CS102
CS101
CS108
CS107
CG100
-42.00 kPa
50 % Open
-161.40 °C
-161.40 °C
-119.90 °C
-161.40 °C
-121.40 °C
-161.40 °C
-161.40 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.00 kPa
LO Tank Pr
LOLO Tank pr
Sounding
25.76 m
Volume
22,670.90 m³
%Full
89.7 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
TRIP
START
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
0.0
0
0.00
11.00
11.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
TRIP
START
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
450
0
117.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
TRIP
START
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
117.00
DISCHARGE SEQUENCE
Available
START
OPEN
Load Control Port
Status:
FROZEN
00:13:56

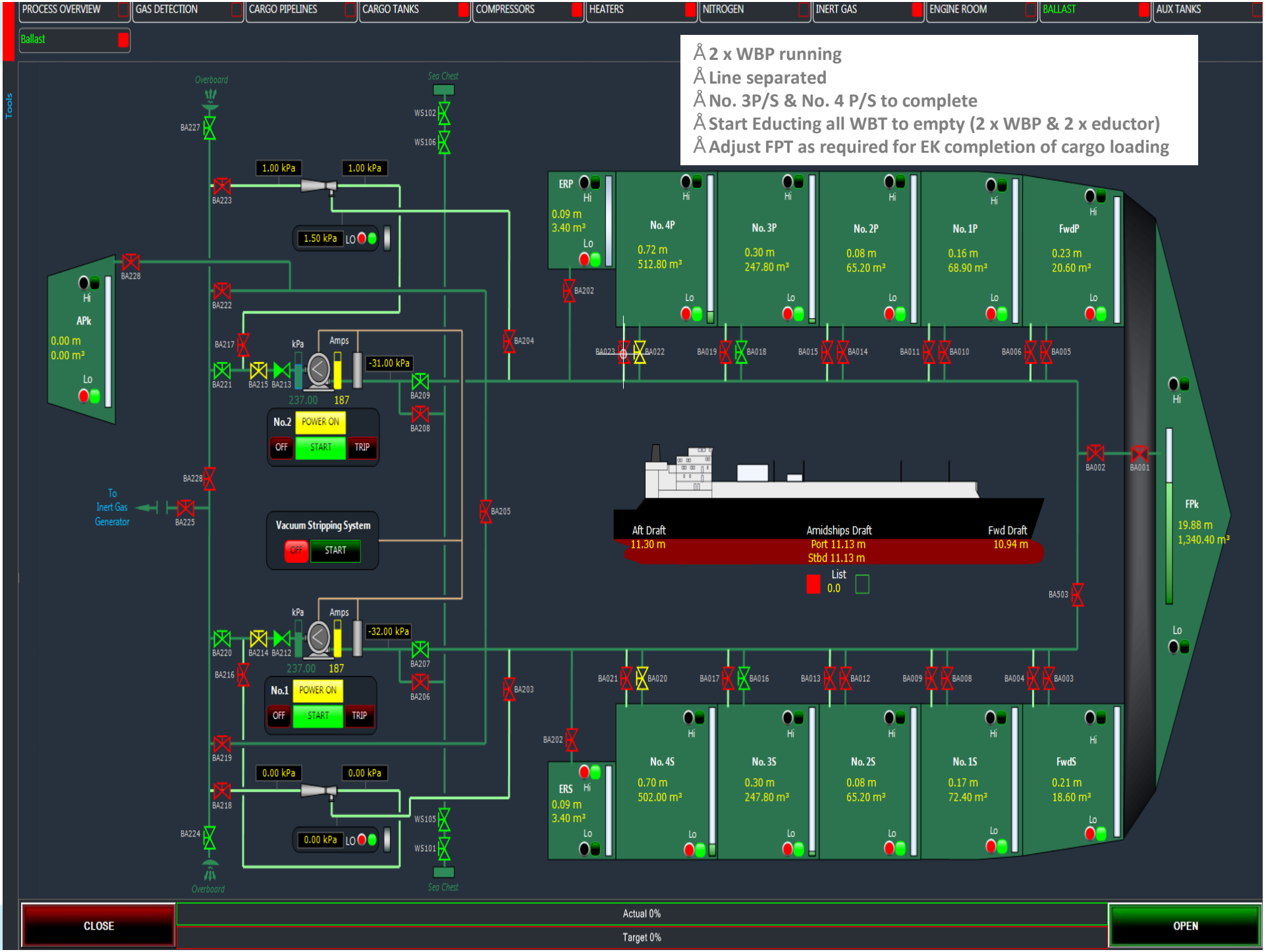

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-42.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
109.00
No.2 CARGO TANK
To Cargo Pipelines
EMERGENCY SHUTDOWN
Activate
CL207
CS204
CS203
CL204
CL202
CL201
CS202
CL203
CL200
CS200
CS201
CS208
CS207
CG200
-42.00 kPa
-126.80 °C
-129.20 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.10 kPa
LO Tank Pr
LOLO Tank pr
Sounding
23.97 m
Volume
43,359.70 m³
%Full
87.8 %
LO Tank Level
DISCHARGE SEQUENCE
Available
START
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
32.4
0
160.00
11.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
111.00
Load Control Port
Status:
FROZEN
00:13:56

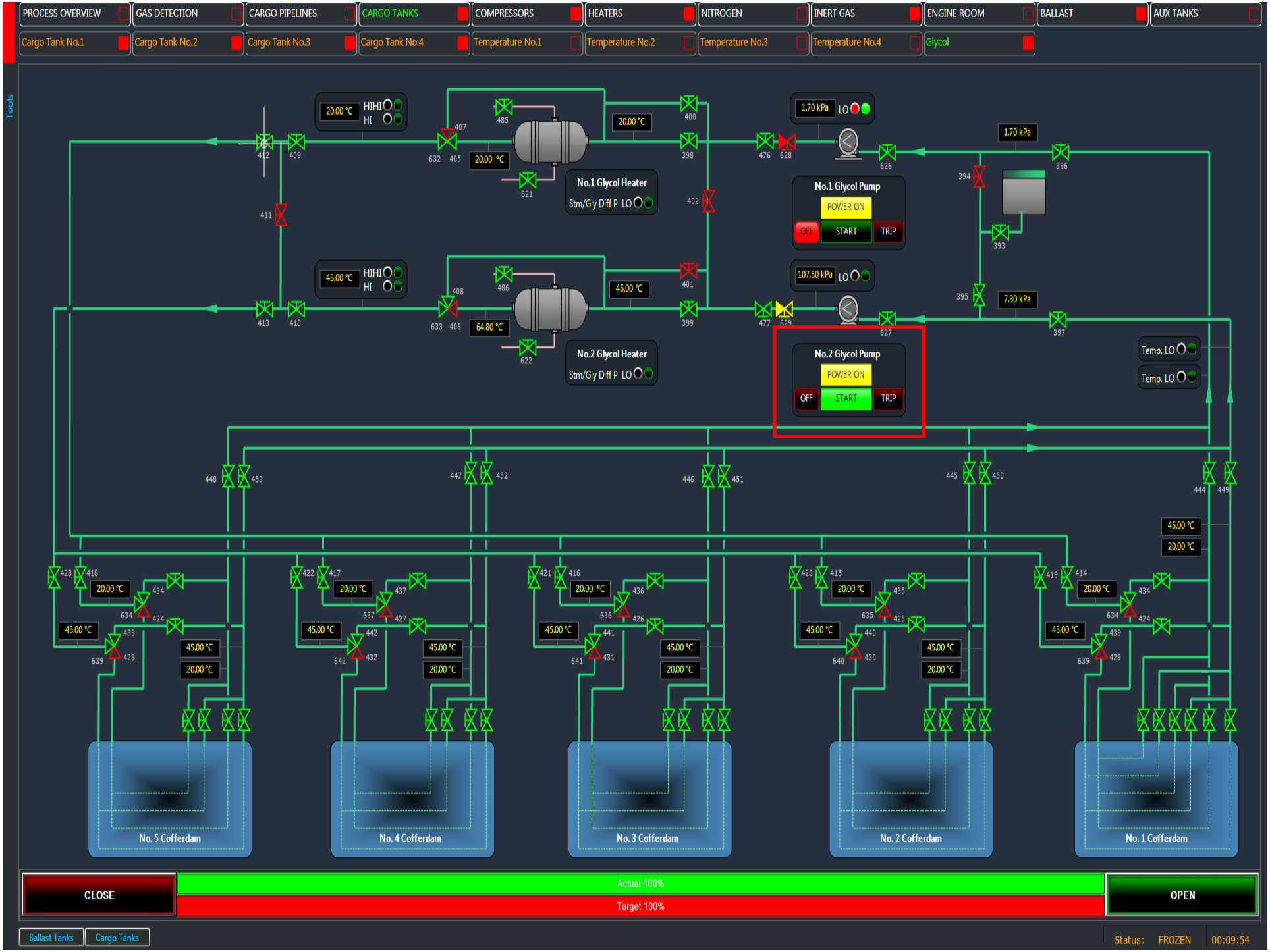

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-42.00
No.3 CARGO TANK
EMERGENCY SHUTDOWN
Activate
To Cargo Pipelines
CL307
CS304
CS303
CL304
CL302
CL301
CS302
CS308
CS307
CG300
CL303
-42.00 kPa
CL300
CS300
CS301
-127.30 °C
-129.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.10 kPa
LO Tank Pr
LOLO Tank pr
Sounding
23.60 m
Volume
42,816.80 m³
%Full
86.7 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
0.0
0
0.00
11.00
11.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
108.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
109.00
DISCHARGE SEQUENCE
Available
START
Actual 100%
Load Control Port
Status:
FROZEN
00:13:56

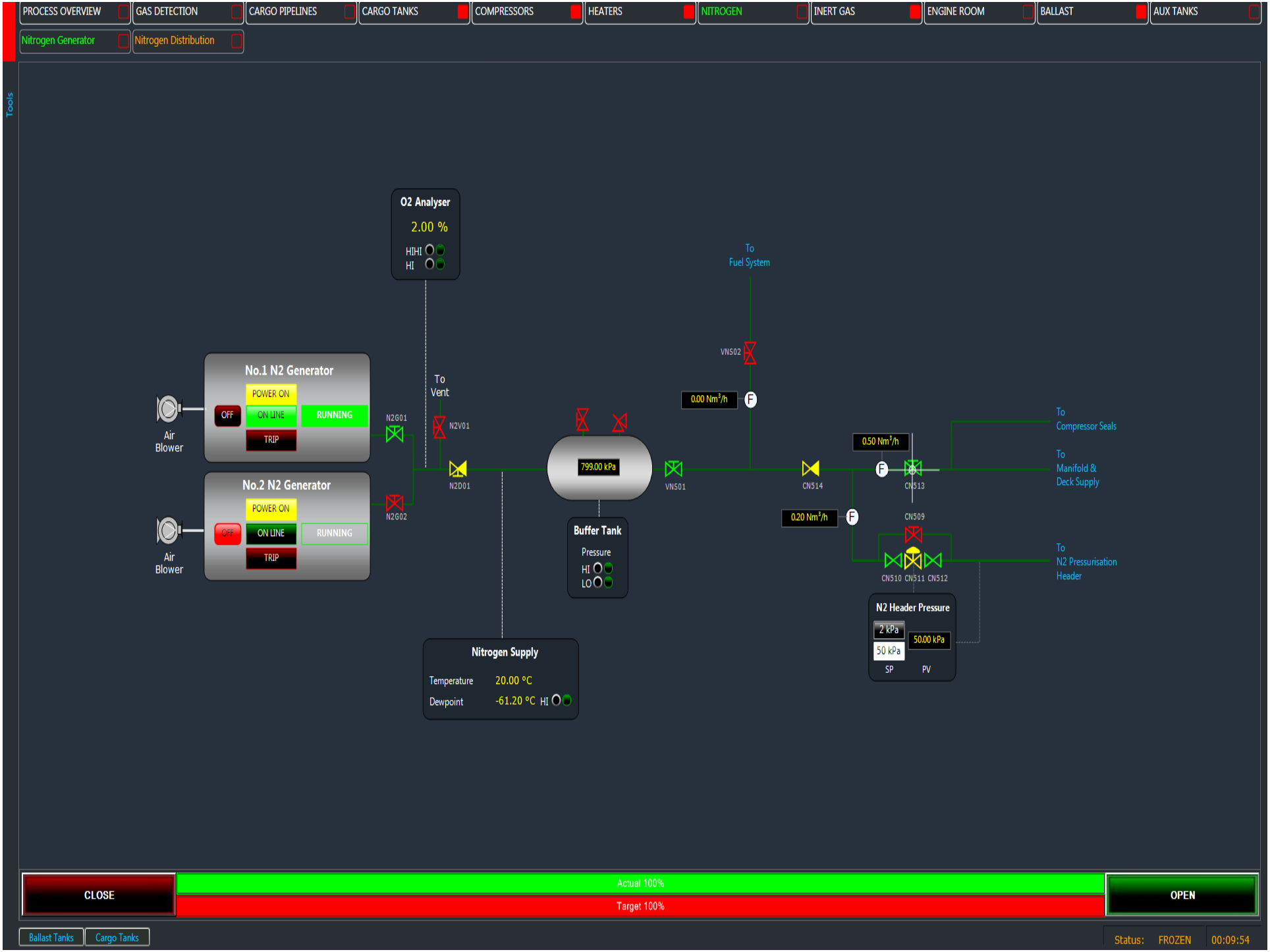

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-42.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Disch Pr
Norm Op Range
Full Range
HI
LO
SP
PV
0
0
111.00
No.4 CARGO TANK
To Cargo Pipelines
EMERGENCY SHUTDOWN
Activate
CL407
CS404
CS403
CL404
CL402
CL401
CS402
CS408
CS407
CL403
CL400
CS400
CS401
CG400
-42.00 kPa
80 % Open
-127.00 °C
-130.40 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
11.40 kPa
LO Tank Pr
LOLO Tank pr
Sounding
24.42 m
Volume
43,995.70 m³
%Full
89.1 %
LO Tank Level
DISCHARGE SEQUENCE
Available
START
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Spray Hdr Pr
Disch Pr
kPa
Norm Op Range
Full Range
HI
LO
SP
PV
0.0
0
0.00
11.00
11.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Disch Pr
Norm Op Range
Full Range
HI
LO
SP
PV
0
0
113.00
OPEN
Load Control Port
Status:
FROZEN
00:13:56



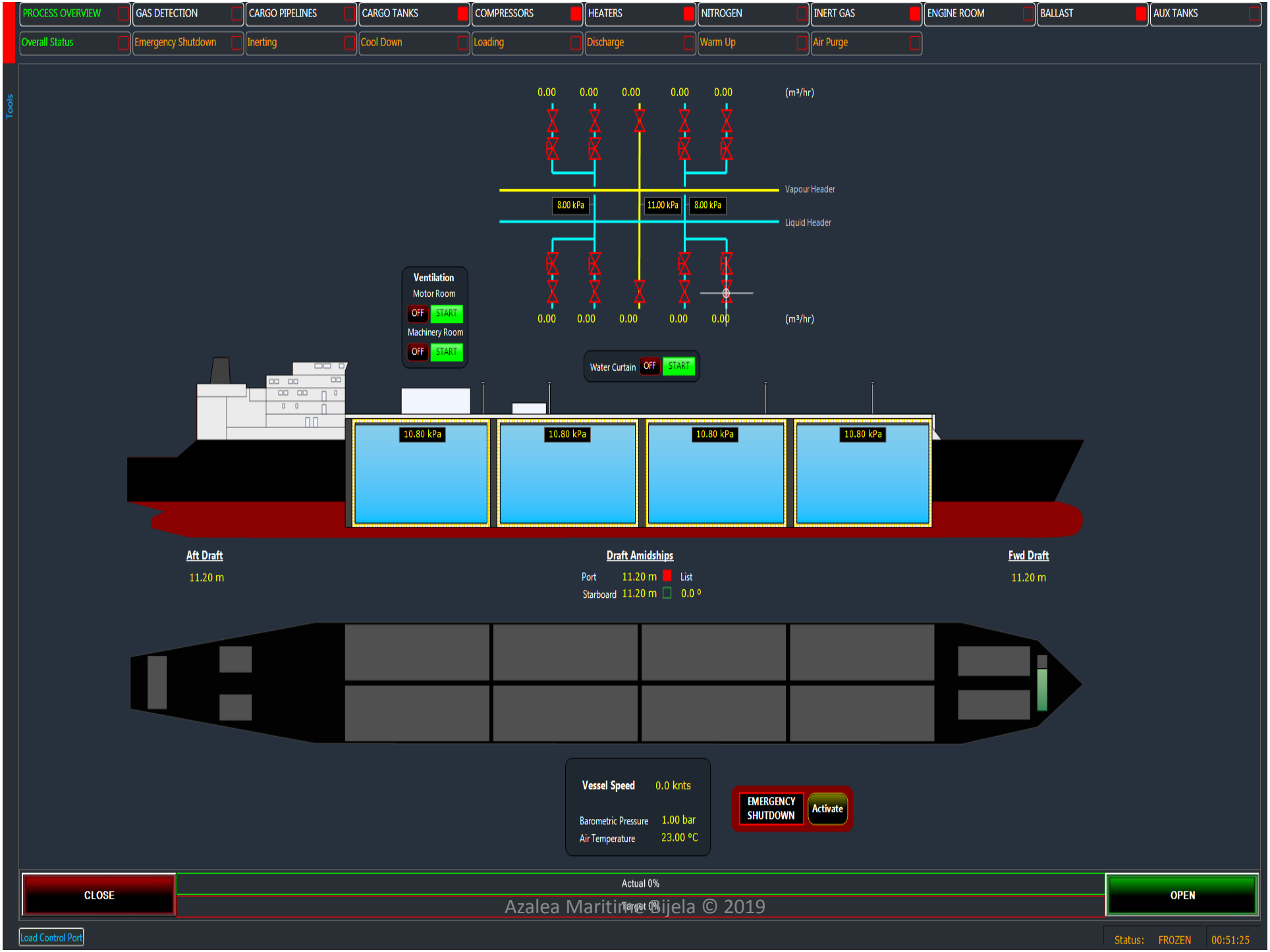

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
HD Compressors
LD 2 Stage No.1
LD 2 Stage No.2
Lub Oil
H/D No. 1 Running Auto
10kPa
Tools
To Manifold
CG547
HI Bearing T
Rotor Excess Vibration
Rotor Excess Position
LO Bulkhead Seal P
HI Bulkhead Seal T
No.1 Nitrogen Seal Pressure
AUTOMATIC CONTROL
MANUAL CONTROL
LO
LOLO
SP
PV 30.0
30.00 kPa
NPV903
CG564
-111.40 °C
33.00 kPa
HI
No. 1
CG545
Lub Oil
-1.70 °C
HI
LO
145.50 kPa
LO
-119.60 °C
7.00 kPa
To Heater
CG501
CG531
No.1 H/D COMPRESSOR
POWER ON
OFF
START
TRIP
Current Flow Rate = 12,560.30 Nm³/h
Capacity Control (Vane Angle Posn)
MANUAL CONTROL
SP
PV 61.8°
+80°
-30°
AUTOMATIC CONTROL
Vapour Header Pr Required?
25
0
SP
PV
10.10
10.00
HI Bearing T
Rotor Excess Vibration
Rotor Excess Position
LO Bulkhead Seal P
HI Bulkhead Seal T
No.2 Nitrogen Seal Pressure
AUTOMATIC CONTROL
MANUAL CONTROL
LO
LOLO
SP
PV 30.0
44.80 kPa
CG565
23.00 °C
8.00 kPa
HI
No. 2
CG546
Lub Oil
-1.70 °C
HI
LO
145.50 kPa
LO
23.10 °C
8.00 kPa
CG532
CG601
No.2 H/D COMPRESSOR
POWER ON
OFF
START
TRIP
Current Flow Rate = 0.00 Nm³/h
Capacity Control (Vane Angle Posn)
MANUAL CONTROL
SP
PV 80.0°
+80°
-30°
AUTOMATIC CONTROL
Vapour Header Pr Required?
25
0
SP
PV
2.50
10.00
From LD Compressors
From Vapour Header
To/From Lub Oil System
From N2 Supply
EMERGENCY SHUTDOWN
Activate
CLOSE
Actual 100%
Target 100%
OPEN
Azalea Maritime Ojela © 2019
Load Control Port
Status: FROZEN
00:13:56

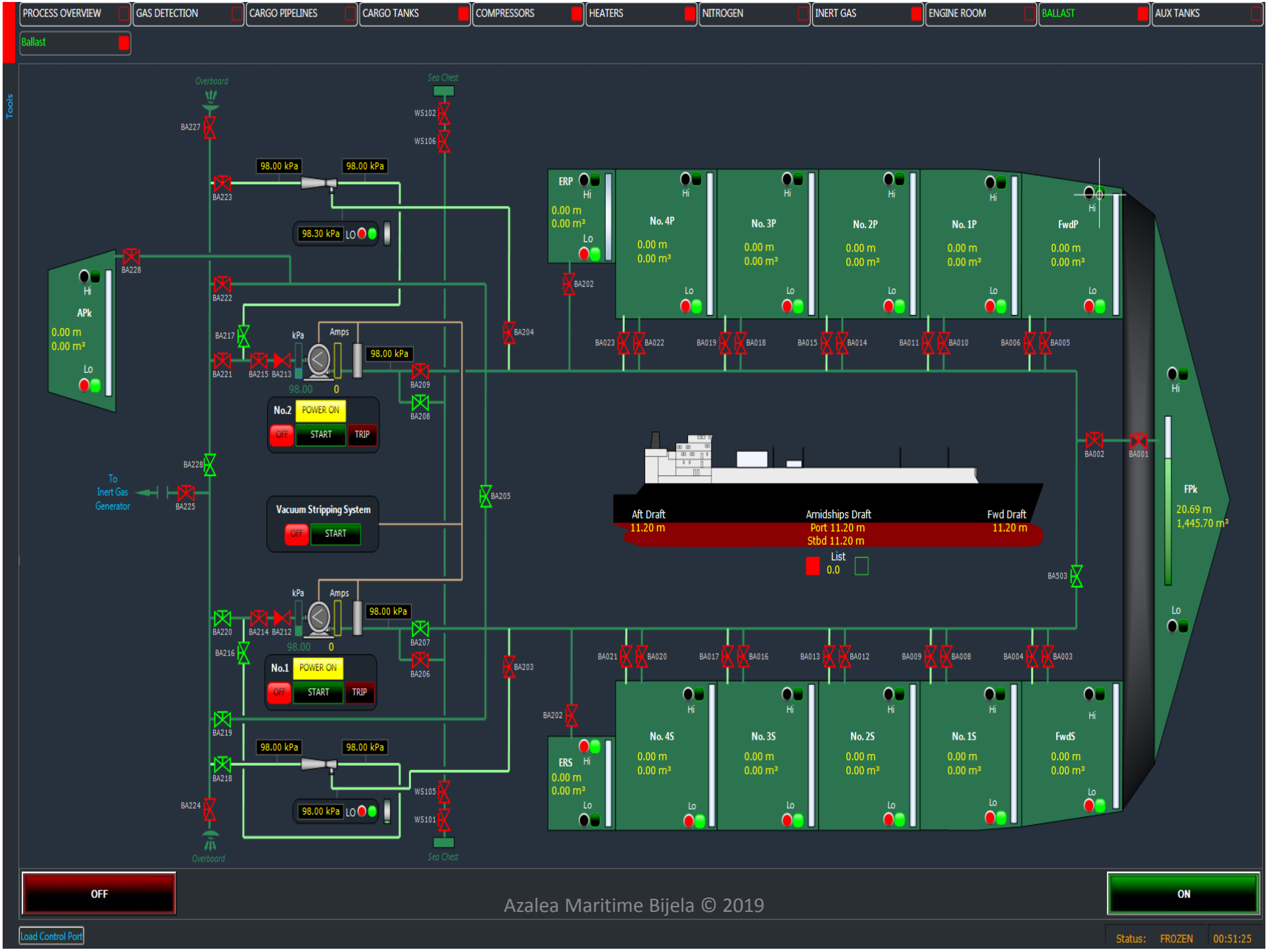

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Ballast
Tools
Å 2 x WBP running
Å Line separated
Å No. 3P/S & No. 4 P/S to complete
Å Start Educting all WBT to empty (2 x WBP & 2 x eductor)
Å Adjust FPT as required for EK completion of cargo loading
Overboard
Sea Chest
BA227
WS102
WS106
1.00 kPa
1.00 kPa
BA223
1.50 kPa LO
BA228
APk
0.00 m
0.00 m³
Lo
BA222
BA217
kPa
Amps
-31.00 kPa
BA221
BA215
BA213
237.00
187
BA209
BA208
No.2
POWER ON
OFF
START
TRIP
BA228
To
Inert Gas
Generator
BA225
Vacuum Stripping System
OFF
START
BA204
BA205
BA203
ERP
Hi
0.09 m
3.40 m³
Lo
BA202
No. 4P
0.72 m
512.80 m³
No. 3P
0.30 m
247.80 m³
No. 2P
0.08 m
65.20 m³
No. 1P
0.16 m
68.90 m³
FwdP
0.23 m
20.60 m³
BA023
BA022
BA019
BA018
BA015
BA014
BA011
BA010
BA006
BA005
Aft Draft
11.30 m
Amidships Draft
Port 11.13 m
Stbd 11.13 m
Fwd Draft
10.94 m
List
0.0
BA002
BA001
FPk
19.88 m
1,340.40 m³
BA503
kPa
Amps
-32.00 kPa
BA220
BA214
BA212
237.00
187
BA207
BA216
BA206
No.1
POWER ON
OFF
START
TRIP
BA219
0.00 kPa
0.00 kPa
BA218
BA224
0.00 kPa LO
WS105
WS101
Overboard
Sea Chest
BA021
BA020
BA017
BA016
BA013
BA012
BA009
BA008
BA004
BA003
BA202
ERS
Hi
0.09 m
3.40 m³
Lo
No. 4S
0.70 m
502.00 m³
No. 3S
0.30 m
247.80 m³
No. 2S
0.08 m
65.20 m³
No. 1S
0.17 m
72.40 m³
FwdS
0.21 m
18.60 m³
CLOSE
Actual 0%
Target 0%
OPEN

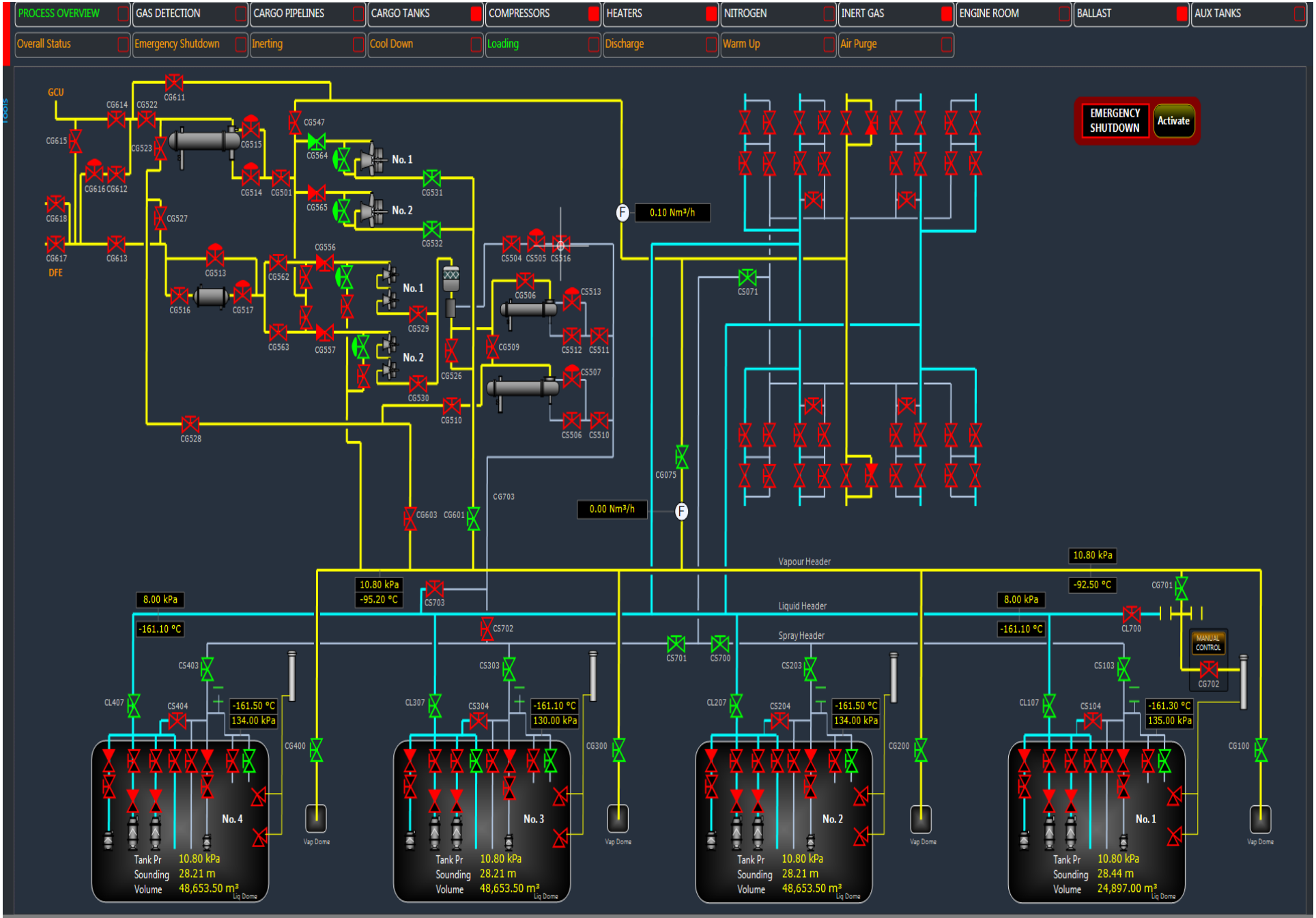

PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
20.00 °C
HIHI
HI
1.70 kPa
LO
No.1 Glycol Heater
Stm/Gly Diff P LO
No.1 Glycol Pump
POWER ON
OFF
START
TRIP
45.00 °C
107.50 kPa
64.80 °C
No.2 Glycol Heater
No.2 Glycol Pump
7.80 kPa
Temp. LO
No. 5 Cofferdam
No. 4 Cofferdam
No. 3 Cofferdam
No. 2 Cofferdam
No. 1 Cofferdam
CLOSE
Actual 100%
Target 100%
OPEN
Ballast Tanks
Cargo Tanks
Status: FROZEN
00:09:54


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Nitrogen Generator
Nitrogen Distribution
Tools
O2 Analyser
2.00 %
HIHI
HI
To
Fuel System
VNS02
0.00 Nm³/h
No.1 N2 Generator
POWER ON
OFF
ON LINE
RUNNING
TRIP
Air
Blower
No.2 N2 Generator
POWER ON
OFF
ON LINE
RUNNING
TRIP
Air
Blower
N2G01
N2G02
To
Vent
N2V01
N2D01
799.00 kPa
VNS01
Buffer Tank
Pressure
HI
LO
CN514
0.50 Nm³/h
0.20 Nm³/h
CN513
CN509
CN510 CN511 CN512
To
Compressor Seals
To
Manifold &
Deck Supply
To
N2 Pressurisation
Header
N2 Header Pressure
2 kPa
50 kPa
50.00 kPa
SP
PV
Nitrogen Supply
Temperature
20.00 °C
Dewpoint
-61.20 °C
HI
CLOSE
Actual 100%
Target 100%
OPEN
Ballast Tanks
Cargo Tanks
Status:
FROZEN
00:09:54

COMPLETED
Loading




PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Ballast
Tools
Overboard
Sea Chest
BA227
WS102
WS106
98.00 kPa
98.00 kPa
BA223
98.30 kPa LO
BA228
BA222
APk
0.00 m
0.00 m³
Hi
Lo
BA217
kPa
Amps
98.00 kPa
BA221
BA215
BA213
98.00
0
BA209
BA208
No.2
POWER ON
OFF
START
TRIP
BA228
To
Inert Gas
Generator
BA225
Vacuum Stripping System
OFF
START
BA204
BA205
BA203
ERP
0.00 m
0.00 m³
BA202
No. 4P
No. 3P
No. 2P
No. 1P
FwdP
0.00 m
0.00 m³
BA023
BA022
BA019
BA018
BA015
BA014
BA011
BA010
BA006
BA005
BA002
BA001
FPk
20.69 m
1,445.70 m³
Aft Draft
11.20 m
Amidships Draft
Port 11.20 m
Stbd 11.20 m
Fwd Draft
11.20 m
List
0.0
BA503
BA220
BA214
BA212
BA216
BA207
BA206
No.1
POWER ON
OFF
START
TRIP
BA219
BA218
BA224
98.00 kPa
98.00 kPa
98.00 kPa LO
WS105
WS101
BA021
BA020
BA017
BA016
BA013
BA012
BA009
BA008
BA004
BA003
ERS
0.00 m
0.00 m³
No. 4S
No. 3S
No. 2S
No. 1S
FwdS
0.00 m
0.00 m³
OFF
ON
Azalea Maritime Bijela © 2019
Load Control Port
Status: FROZEN
00:51:25

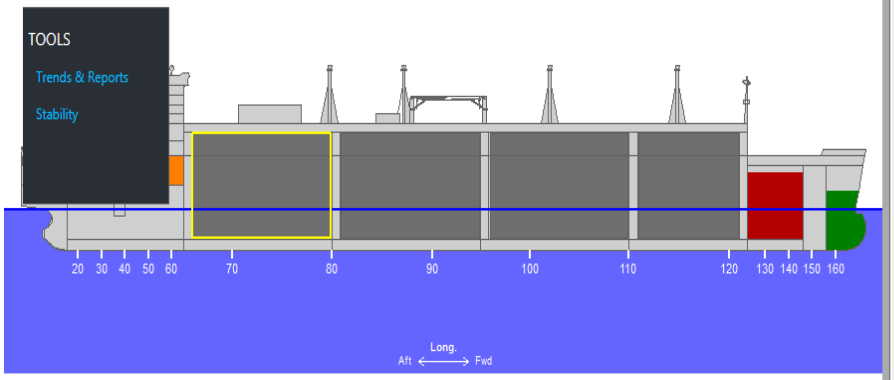


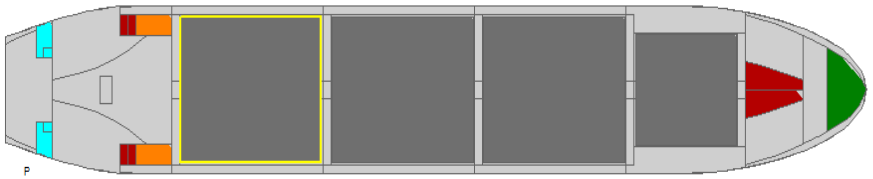
Total Cargo = 170,644 m3

CargoMax for LNG 170k - - [New]

File Edit View Tools Damage Grounding Online Help

Alarms | Log | [Online M] | Calc GMr





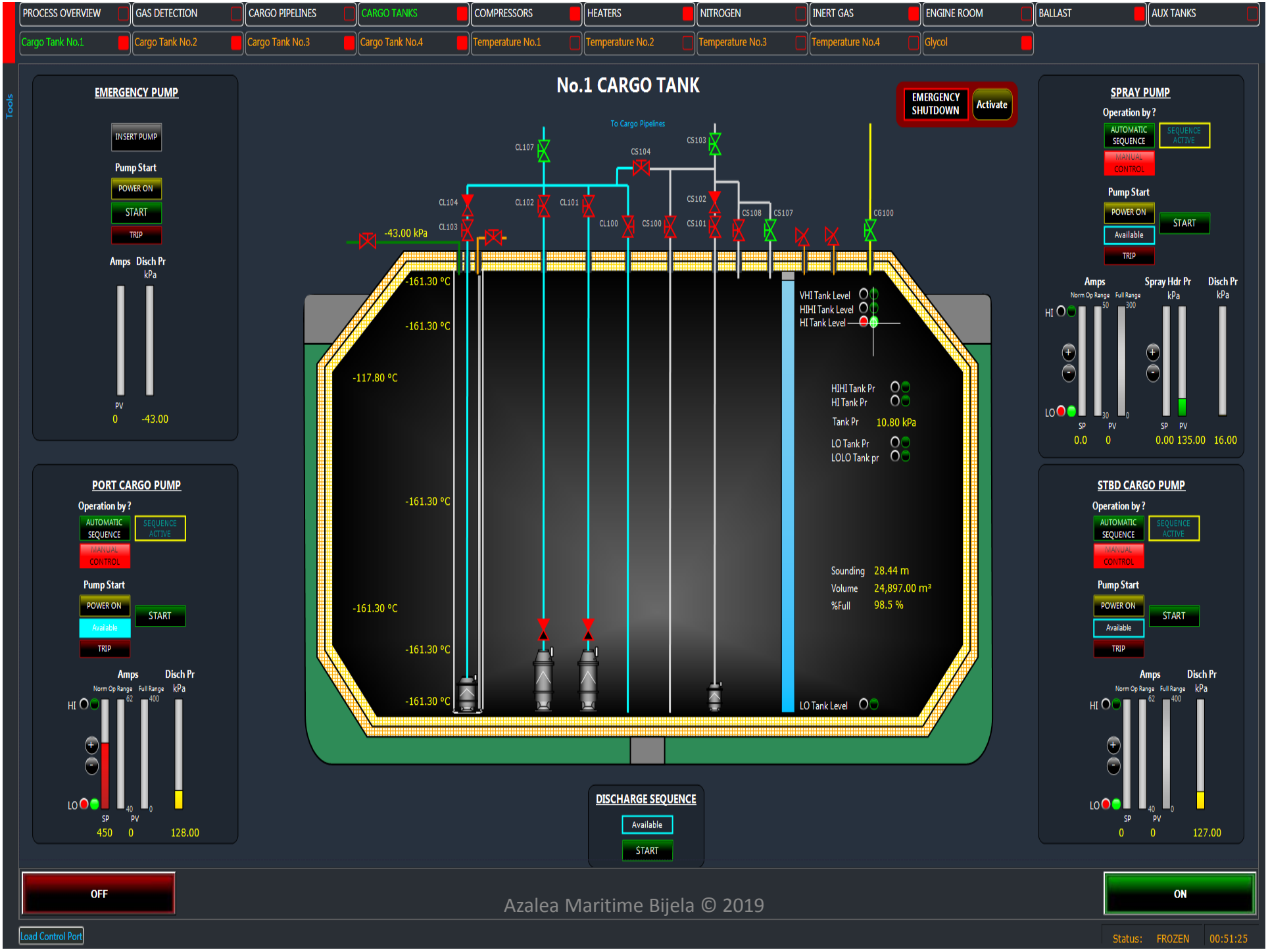
Alarms | Weights | Trim & Stability | Righting Arm | Strength | Freeboards | Cargo | Air Drafts

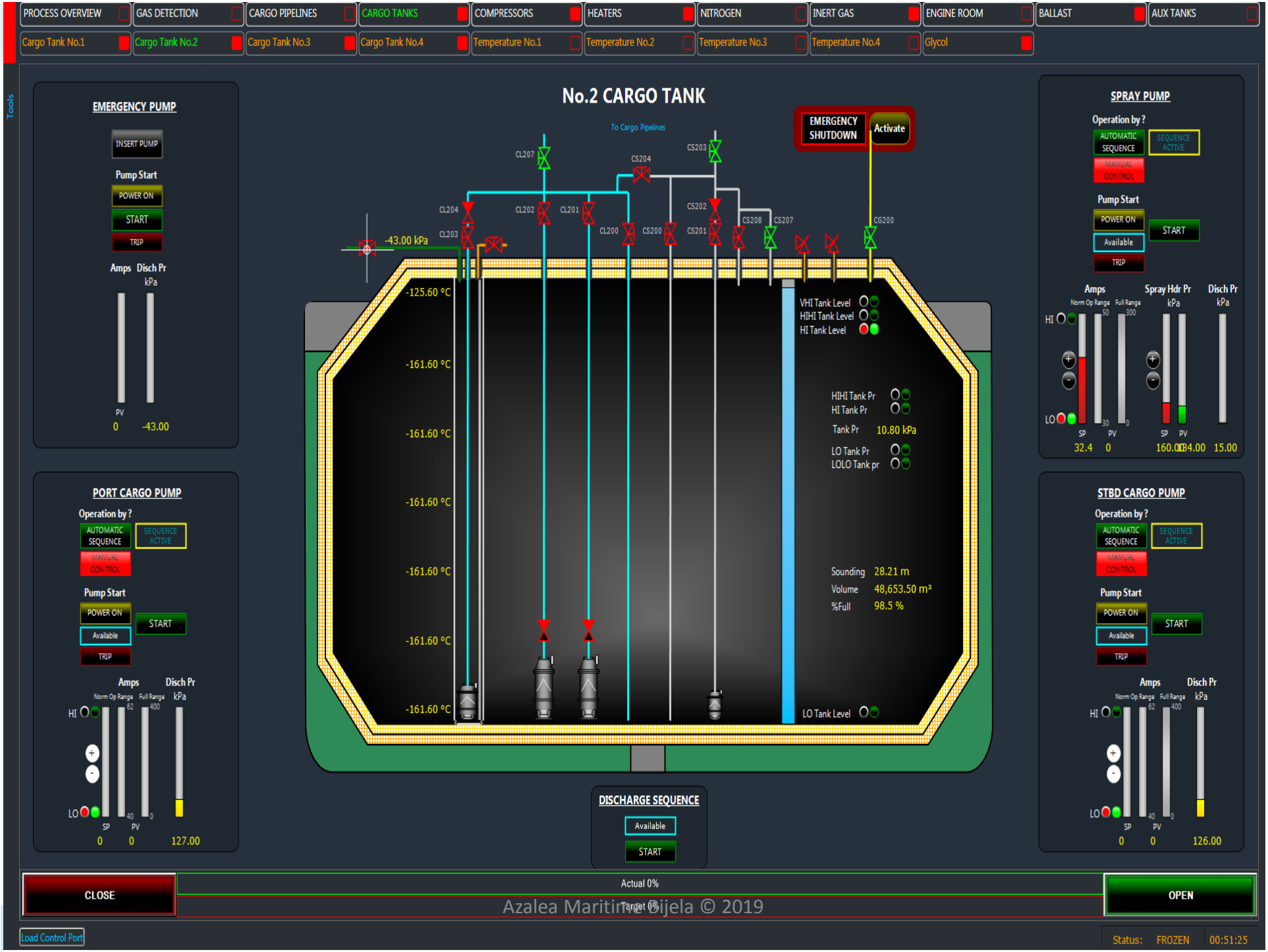
No.	Status	Description	Attained	Pass If	Type
1	PASS	Calculation Status	OK	Status = OK	Requirement
2	PASS	Avail Deadweight	12,148.5 MT	AvDWT >= 0.0 MT	Requirement
3	PASS	Max BMom %Allow	6.3 %	-100.0 =< BM% <= 100.0	Requirement
4	PASS	Max Shear %Allow	6.2 %	-100.0 =< SF% <= 100.0	Requirement
5	PASS	Prop Immersion	131.0 %	PropImm >= 100.0	Requirement
6	PASS	GZ Criteria Status	PASS	GZStat = PASS	Requirement
7	Needs Update	GMt Margin	Needs Update	GMtMarg >= 0.000 m	Requirement
8	WARN	TK1 %Full	98.5 %	TK1 %Full <= 98.00%	Recommendation
9	WARN	TK2 %Full	98.5 %	TK2 %Full <= 98.00%	Recommendation
10	WARN	TK3 %Full	98.5 %	TK3 %Full <= 98.00%	Recommendation
11	WARN	TK4 %Full	98.5 %	TK4 %Full <= 98.00%	Recommendation

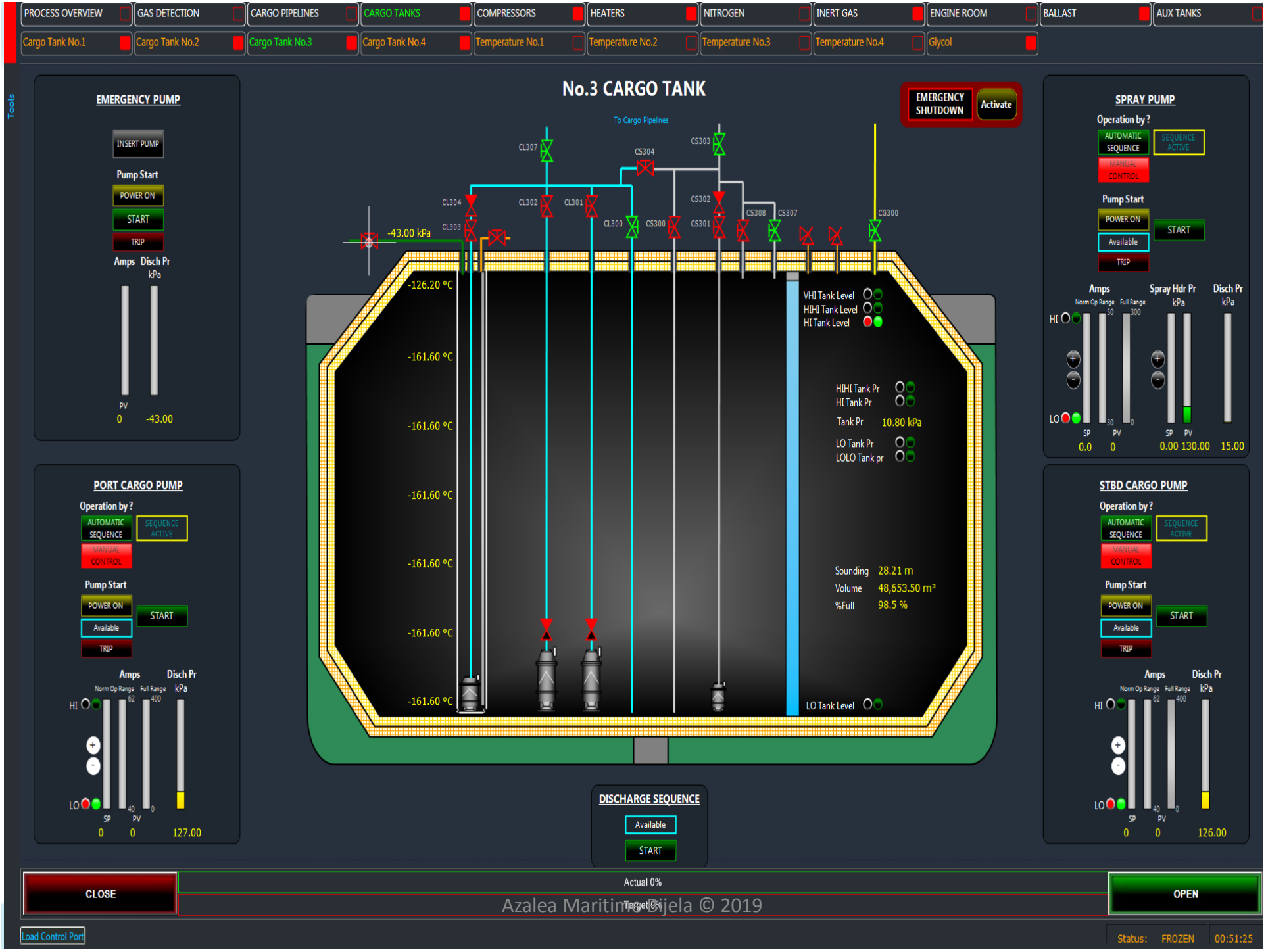
Calculation Status: OK
Calculation Method: Intact
Sea Specific Gravity: 1.0250
Displacement: 114,951.9 MT
Avail Deadweight: 12,148.5 MT
Draft at Marks - Aft: 11.190 m
Draft at Marks - Mid: 11.190 m
Draft at Marks - Fwd: 11.190 m
Trim at Perp: 0.001F m
Heel Angle: 0.00 deg
Prop Immersion: 131.0 %
GMt: 3.817 m
GMt Margin: Needs Update m
Air Draft

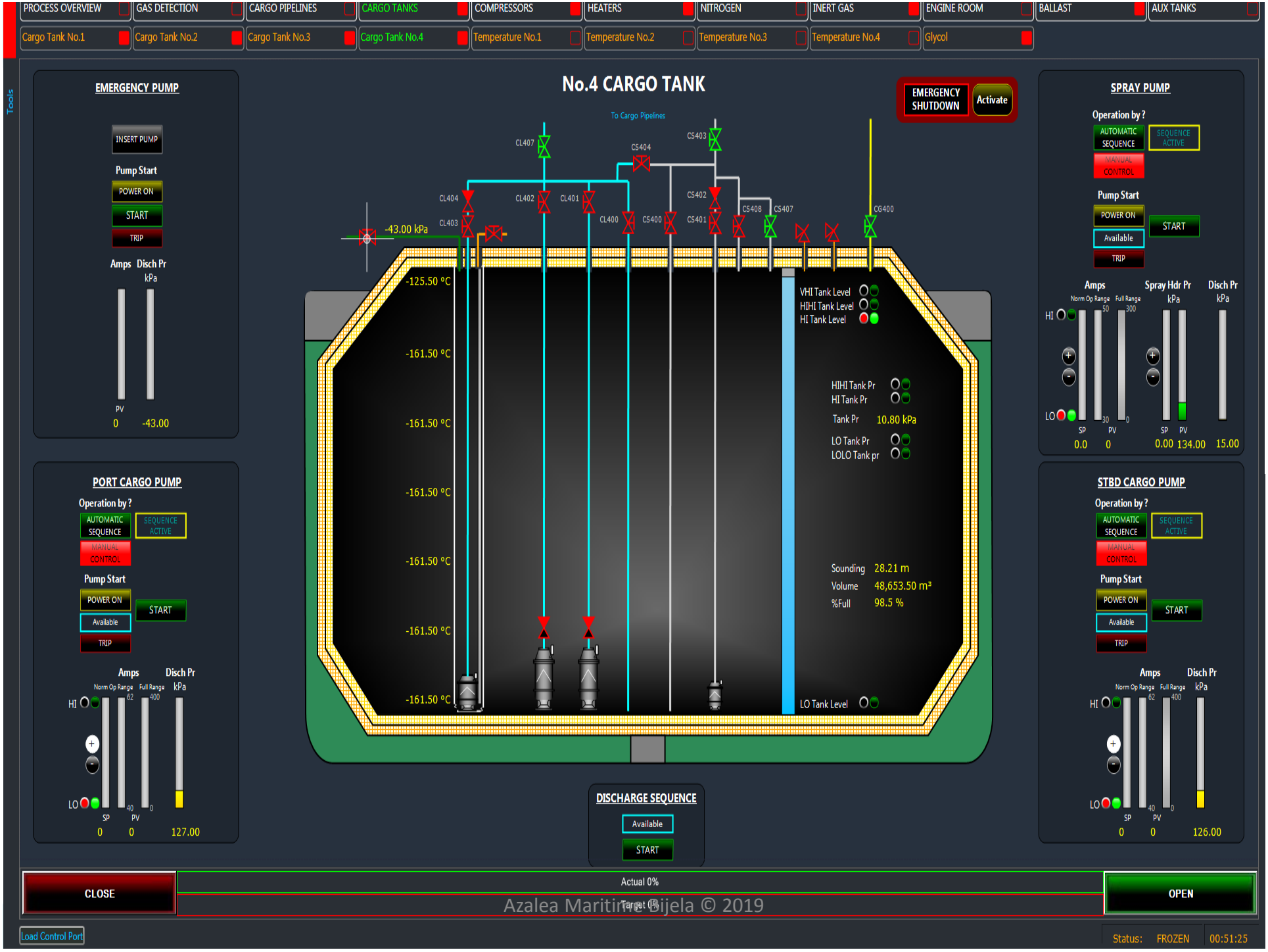
Name	Source	Last Read	Cargo	USource	Ull/Snd	UTrim	UHeel	Adj Ull/Snd	%Full	TOV	Dens	Weight	FSt
					m	m	deg	m	%	m3	MT/m3	MT	m-MT
TK1	<User>	12/28/2017 12:58		SOUNDING TABLE	28.368 S	[0.078A]	[0.00]	28.368 S	98.5	24,843.7	[0.4266]	10,598.3	12,610.8
TK2	<User>	12/28/2017 12:58		SOUNDING TABLE	28.163 S	[0.078A]	[0.00]	28.163 S	98.5	48,600.0	[0.4269]	20,747.3	19,915.0
TK3	<User>	12/28/2017 12:58		SOUNDING TABLE	28.163 S	[0.078A]	[0.00]	28.163 S	98.5	48,600.0	[0.4269]	20,747.3	19,915.0
TK4	<User>	12/28/2017 12:59		SOUNDING TABLE	28.163 S	[0.078A]	[0.00]	28.163 S	98.5	48,600.0	[0.4269]	20,747.3	19,914.8

Liquified Gas Totals						98.5	170,643.7		72,840.3	72,355.7


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
No.1 CARGO TANK
EMERGENCY SHUTDOWN
Activate
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-43.00
To Cargo Pipelines
CL107
CS104
CS103
CL104
CL102
CL101
CS102
CS108
CS107
CG100
CL103
-43.00 kPa
CL100
CS100
CS101
-161.30 °C
-161.30 °C
-117.80 °C
-161.30 °C
-161.30 °C
-161.30 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
10.80 kPa
LO Tank Pr
LOLO Tank pr
Sounding
28.44 m
Volume
24,897.00 m³
%Full
98.5 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
0.0
0
0.00
135.00
16.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
450
0
128.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
127.00
DISCHARGE SEQUENCE
Available
START
OFF
ON
Azalea Maritime Bijela © 2019
Load Control Port
Status:
FROZEN
00:51:25


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-43.00
No.2 CARGO TANK
To Cargo Pipelines
EMERGENCY SHUTDOWN
Activate
CL207
CS204
CS203
CL204
CL202
CL201
CS202
CS208
CS207
CG200
CL203
-43.00 kPa
CL200
CS200
CS201
-125.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
10.80 kPa
LO Tank Pr
LOLO Tank pr
Sounding
28.21 m
Volume
48,653.50 m³
%Full
98.5 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Spray Hdr Pr
Disch Pr
kPa
Norm Op Range
Full Range
HI
LO
SP
PV
32.4
0
160.00
34.00
15.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Disch Pr
kPa
Norm Op Range
Full Range
HI
LO
SP
PV
0
0
127.00
DISCHARGE SEQUENCE
Available
START
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Disch Pr
kPa
Norm Op Range
Full Range
HI
LO
SP
PV
0
0
126.00
CLOSE
Actual 0%
Target 0%
OPEN
Azalea Maritime Bijela © 2019
Load Control Port
Status:
FROZEN
00:51:25


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
No.3 CARGO TANK
EMERGENCY SHUTDOWN
Activate
To Cargo Pipelines
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-43.00
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
kPa
Disch Pr
kPa
HI
LO
SP
PV
0.0
0
0.00
130.00
15.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
127.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
START
Available
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
126.00
CL307
CS304
CS303
CL304
CL302
CL301
CS302
CS308
CS307
CL303
CL300
CS300
CS301
CG300
-43.00 kPa
-126.20 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
-161.60 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
10.80 kPa
LO Tank Pr
LOLO Tank pr
Sounding
28.21 m
Volume
48,653.50 m³
%Full
98.5 %
LO Tank Level
DISCHARGE SEQUENCE
Available
START
CLOSE
Actual 0%
Target 0%
OPEN
Azalea Maritime Ojela © 2019
Load Control Port
Status:
FROZEN
00:51:25


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Cargo Tank No.1
Cargo Tank No.2
Cargo Tank No.3
Cargo Tank No.4
Temperature No.1
Temperature No.2
Temperature No.3
Temperature No.4
Glycol
Tools
EMERGENCY PUMP
INSERT PUMP
Pump Start
POWER ON
START
TRIP
Amps
Disch Pr
kPa
PV
0
-43.00
No.4 CARGO TANK
To Cargo Pipelines
EMERGENCY SHUTDOWN
Activate
CL407
CS404
CS403
CL404
CL402
CL401
CS402
CS408
CS407
CG400
CL403
-43.00 kPa
CL400
CS400
CS401
-125.50 °C
-161.50 °C
VHI Tank Level
HIHI Tank Level
HI Tank Level
HIHI Tank Pr
HI Tank Pr
Tank Pr
10.80 kPa
LO Tank Pr
LOLO Tank pr
Sounding
28.21 m
Volume
48,653.50 m³
%Full
98.5 %
LO Tank Level
SPRAY PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Spray Hdr Pr
Disch Pr
HI
LO
SP
PV
0.0
0
0.00
134.00
15.00
PORT CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
127.00
STBD CARGO PUMP
Operation by ?
AUTOMATIC SEQUENCE
SEQUENCE ACTIVE
MANUAL CONTROL
Pump Start
POWER ON
Available
START
TRIP
Amps
Norm Op Range
Full Range
Disch Pr
kPa
HI
LO
SP
PV
0
0
126.00
DISCHARGE SEQUENCE
Available
START
CLOSE
Actual 0%
Target 0%
OPEN
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Load Control Port
Status:
FROZEN
00:51:25


PROCESS OVERVIEW
GAS DETECTION
CARGO PIPELINES
CARGO TANKS
COMPRESSORS
HEATERS
NITROGEN
INERT GAS
ENGINE ROOM
BALLAST
AUX TANKS
Nitrogen Generator
Nitrogen Distribution
Tools
To Engine Room
To Compressor Seals
To Manifold
From N2 Generator
800.00 kPa
Buffer Tank
VN501
CN514
CN513
0.10 Nm³/h
CN509
CN510 CN511 CN512
N2 Header Pressure
2 kPa
50 kPa
SP
50.00 kPa
PV
LO HI
IBS Pr 0.80 kPa
IS Pr 1.20 kPa
IBS/IS Diff Pr 0.40 kPa
No.3
CN317
CN307
CN305
CN311
CN322
CN333
CN320
CN308
CN314
CN306
0.00 Nm³/h
No.1
CN117
CN107
CN105
CN111
CN122
CN133
CN120
CN108
CN114
CN106
N2 Header
No.4
CN417
CN407
CN405
CN411
CN422
CN433
CN420
CN408
CN414
CN406
No.2
CN217
CN207
CN205
CN211
CN222
CN233
CN220
CN208
CN214
CN206
CLOSE
Actual 100%
Purge 100%
OPEN
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Load Control Port
Status: FROZEN
00:51:25

Water Ballast Quantity **Departure** Load Port		
Water Ballast Tanks	**Sounding (m)**	**Volume (m3)**
FPT	20.69 m	1,445 m3
Frwd Port	0.00 m	0.000 m3
Frwd Stbd	0.00 m	0.000 m3
No. 1 Port	0.00 m	0.000 m3
No.1 Stbd	0.00 m	0.000 m3
No. 2 Frwd Port	0.00 m	0.000 m3
No. 2 Frwd Stbd	0.00 m	0.000 m3
No. 3 Aft Port	0.00 m	0.000 m3
No. 3 Aft Stbd	0.00 m	0.000 m3
No. 4 Port	0.00 m	0.000 m3
No. 4 Stbd	0.00 m	0.000 m3
E/R Port	0.00 m	0.000 m3
E/R Stbd	0.00 m	0.000 m3
APT	0.00 m	0.000 m3
	Total:	**1,445 m3**
		1,481 MT