Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

CONTROL SYSTEM EL. POWER
SAFETY SYSTEM EL. POWER
TELEGR. SYSTEM EL. POWER

RUDDER ANGLE: 0
MANEUV. VALVE LIFT, %: 100
SHAFT R.P.M.: 90.5

SPEED, knt: 22.6
POWER, kW: 29867

WRONG WAY
TURN GEAR ENGAGE
MANEUV. V CLOSE

CONTROL POS. TRANSFER
LOCAL CONTROL
BRIDGE
ECR

BRIDGE ORDER: 100
SPEED SET POINT: 100

STAND BY
FINISH WITH ENGINE
SEA MODE

HPT 2-ND STAGE DRAIN V.
CLOSE OPEN
AUTO OPEN

ASTERN GUARD VALVE
CLOSE OPEN
AUTO CLOSE OPEN

HPT BLEEDER DRAIN V.
CLOSE OPEN
AUTO OPEN

MANEUV. VALVE DRAIN V.
CLOSE OPEN
AUTO OPEN

HPT STM CHEST DRAIN V.
CLOSE OPEN
AUTO OPEN

HPT CASING DRAIN V.
CLOSE OPEN
AUTO OPEN

SAFETY SYSTEM & EMERGENCY CONTROL
SHUT DOWN
SLOW DOWN
SHUT D. BYPASS
SLOW D. BYPASS
SAFETY RESET
EMERGENCY STOP
To lift glass

CONTROL MODE
LEVER DIRECT
DIRECT CONTROL
ASTER AHEAD

PROGRAM CONTROL
IN PROGRESS
PROGRAM BYPASS
NORM. BYPASS

OVERSPEED PREVENTER
ON OFF

AUTO SPINNING
SPIN. ZONE
ON OFF

WARMING THROUGH
WARMING THROUGH

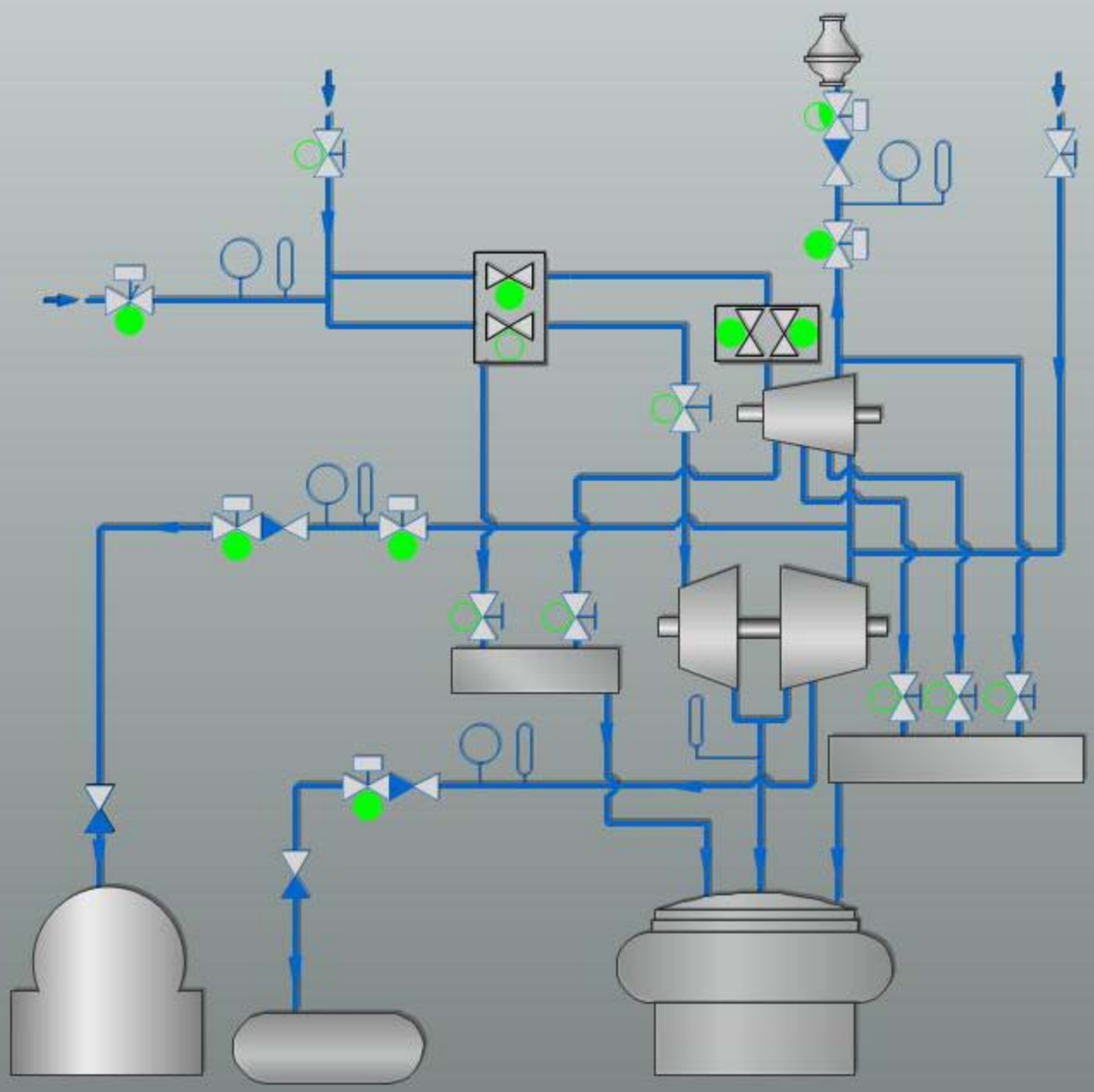
NOZZLE VALVE OPERATION PANEL
NOZZLE VALVE 1
CLOSE OPEN
NOZZLE VALVE 2
CLOSE OPEN

MT Manual Trip | MT Overspeed | MT LO Press Low | Main Condenser Vacuum Low | MB Steam Drum Level High | Main Steam Press Low
Turn Gear Engaged | Auto Spinning Overspeed | MT Control Oil Press Low | Main Cond. Hotwell Level High | Main Boilers Trip

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



Bleed & Drain System

CHESTS

SH STEAM
bar 0 20 40 60 80 — 60

HPT CHEST
bar 0 20 40 60 80 — 60

AST CHEST
bar 0 20 40 60 80 — 0

SH STEAM
600 500 400 300 200 100 0 °C — 515

HPT CASING
600 500 400 300 200 100 0 °C — 514

HPT CHEST
600 500 400 300 200 100 0 °C — 515

AST CHEST
600 500 400 300 200 100 0 °C — 239

BLEEDERS

HP BLEED
bar 0 5 10 15 20 25 — 18.7

IP BLEED
bar 0 2 4 6 8 10 — 5.4

LP BLEED
bar -1.0 0.0 1.0 — 0.51

HP BLEED
400 350 300 250 200 150 100 50 0 °C — 334

IP BLEED
400 350 300 250 200 150 100 50 0 °C — 196

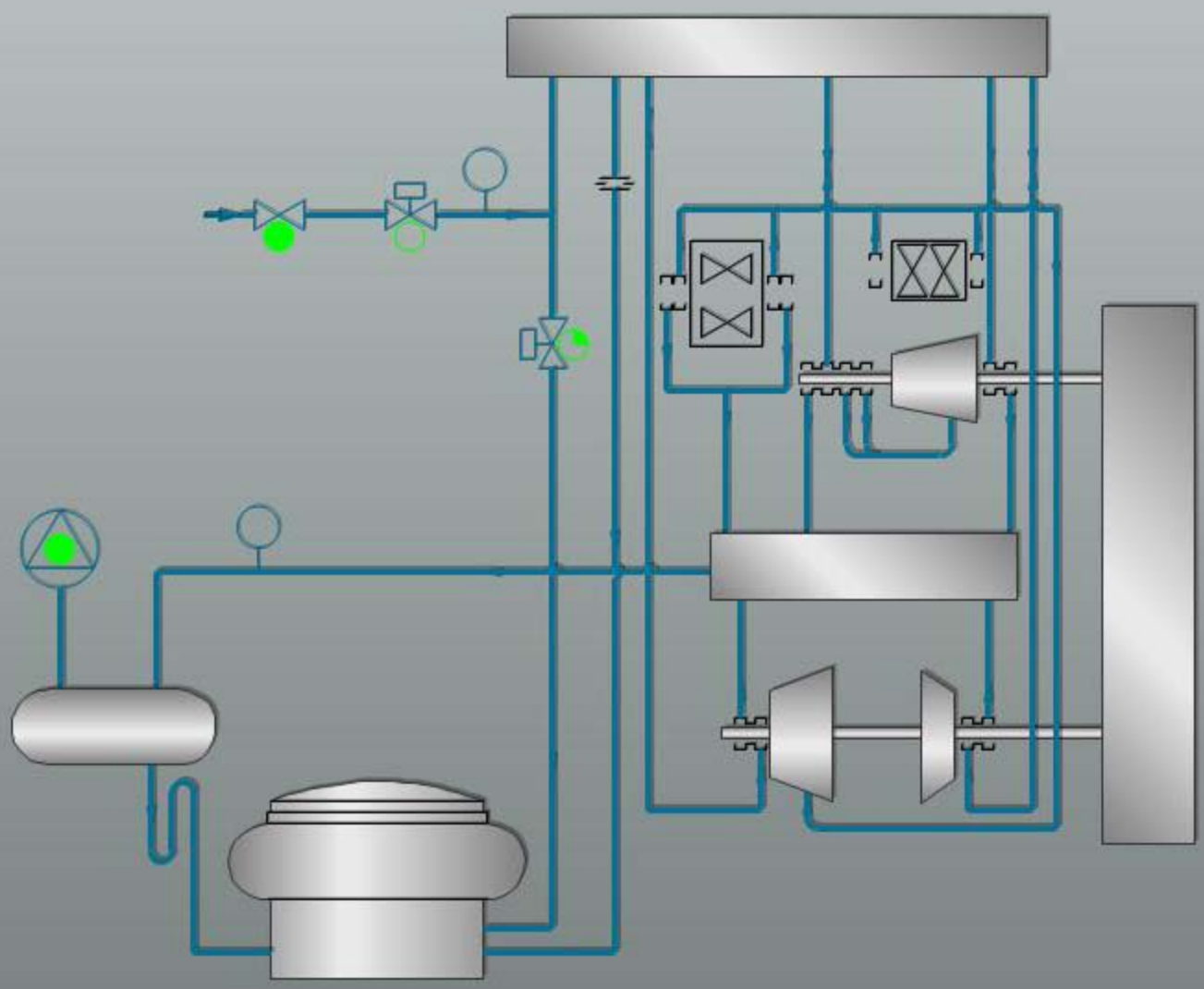
LP BLEED
300 250 200 150 100 50 0 °C — 112

EXH. STEAM
200 150 100 50 0 °C — 73

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



Gland system

PACKING STEAM

GLAND COND.

-301.0 mm WC

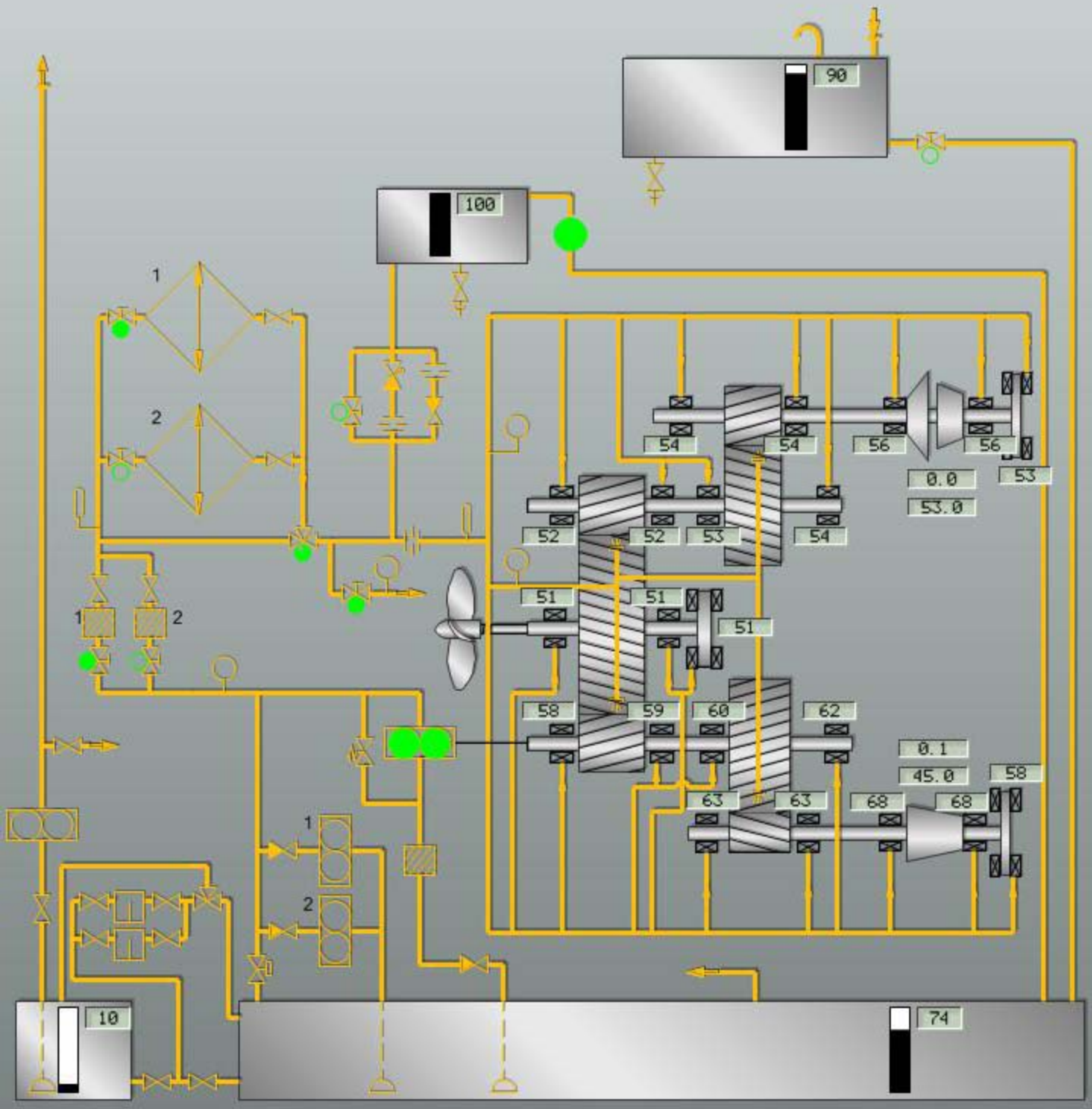
STEAM SUPPLY VALVE

FAN ON

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



Turbine LO system

LO PUMPS DISCHARGE
bar 0 1 2 3 4 5
4.5

LO FILTER DROP
bar 0.0 0.5 1.0
0.30

TURBINE INLET
100 75 50 25 0
°C
45

LO COOLER INLET
100 75 50 25 0
°C
54

AUX. LO PUMPS
MANUAL / AUTO
PUMP 1
PUMP 2

F2
F 1 2

BEARING INLET
bar 0 1 2 3 4 5
1.9

GEAR INLET
bar 0 1 2 3 4 5
1.9

MANUVRING OPER. OIL
bar 0 1 2 3 4 5
3.7
MAN. OIL

TEMPERATURE CONTROL
MANUAL / AUTO
VALVE POSITION
100 80 60 40 20 0
SET POINT, °C
30 35 40 45 50
45

COOLER 1
COOLER 2

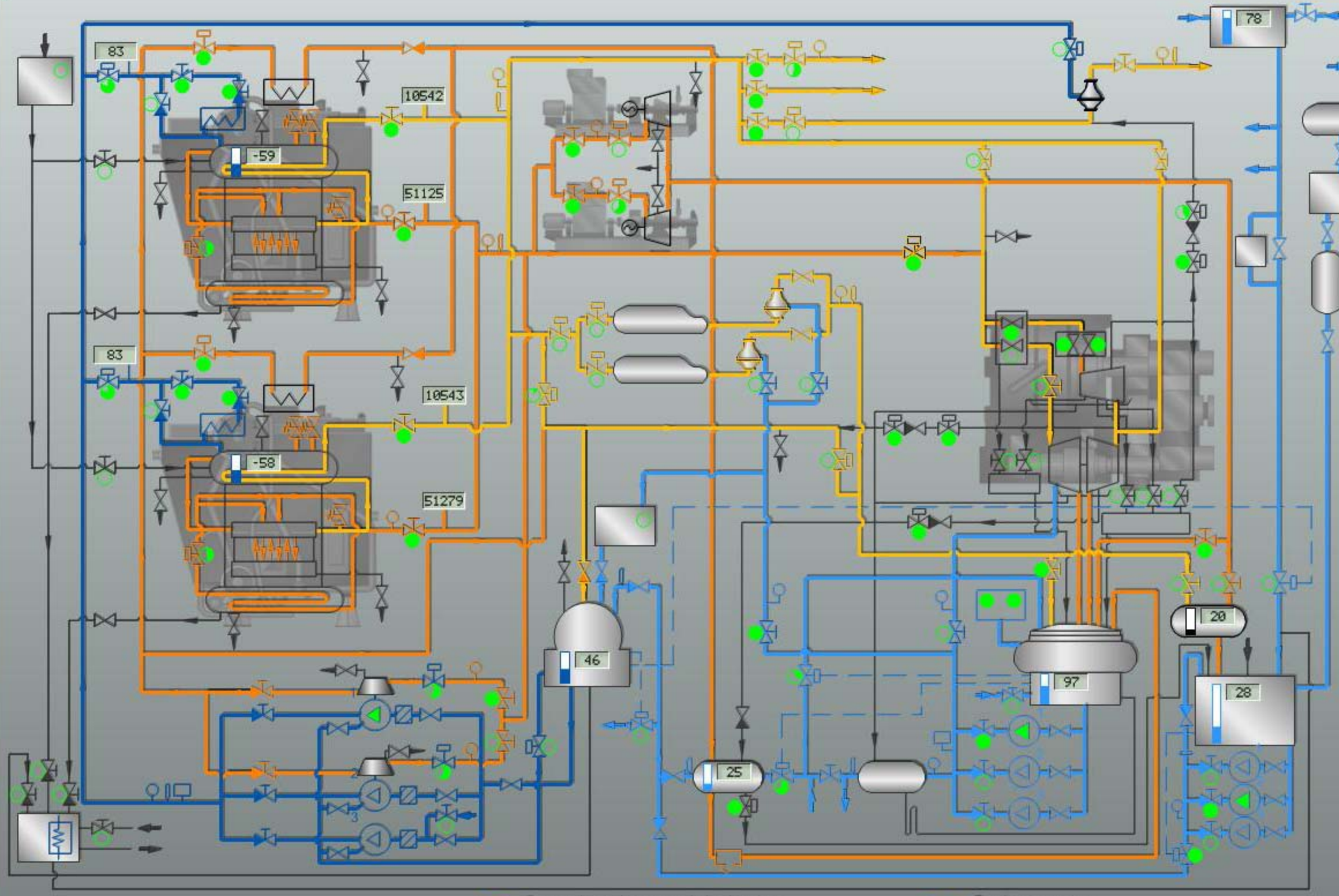
LO GRAVITY TANK
MAKE UP

LO SUMP TANK
MAKE UP

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

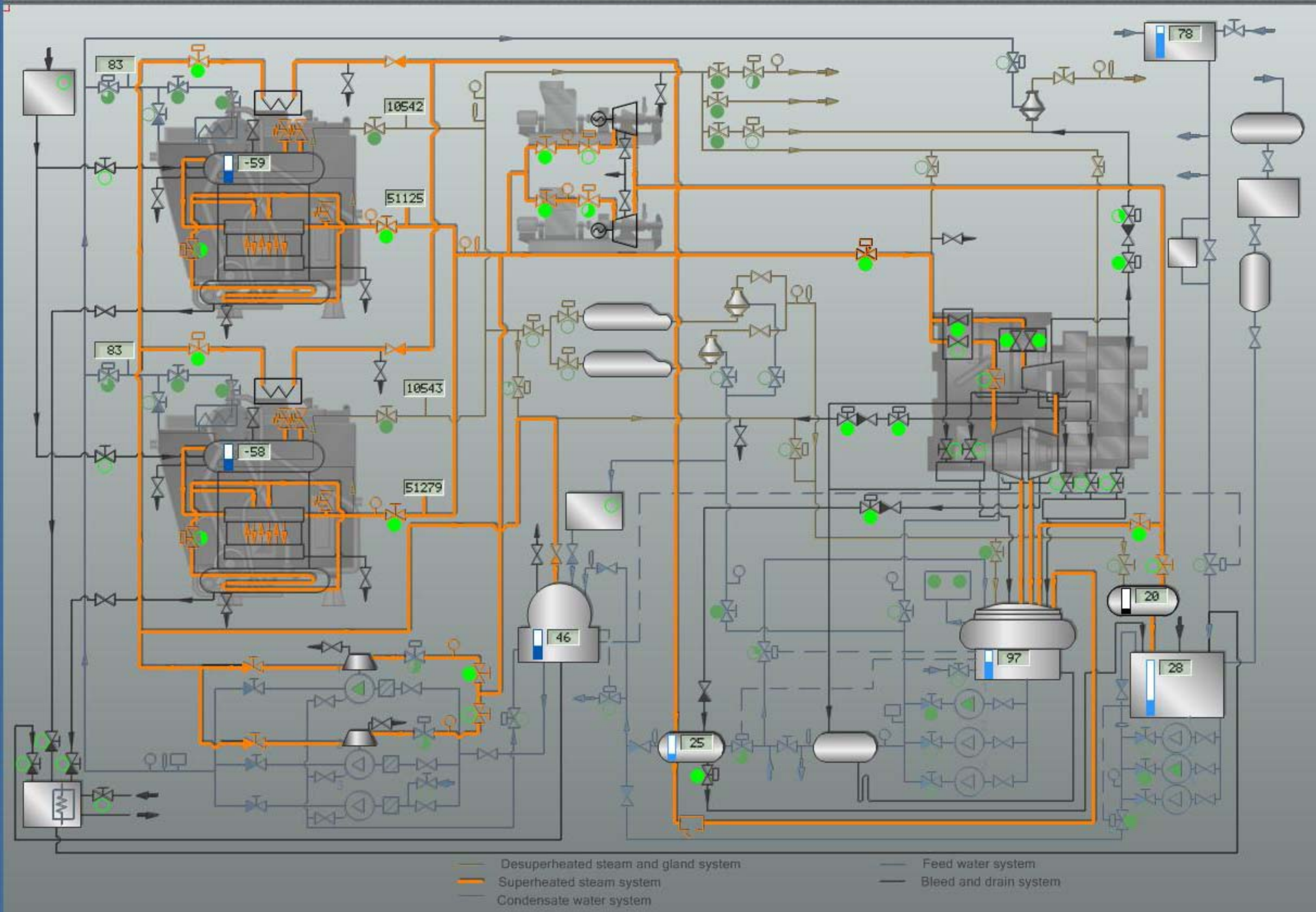
Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

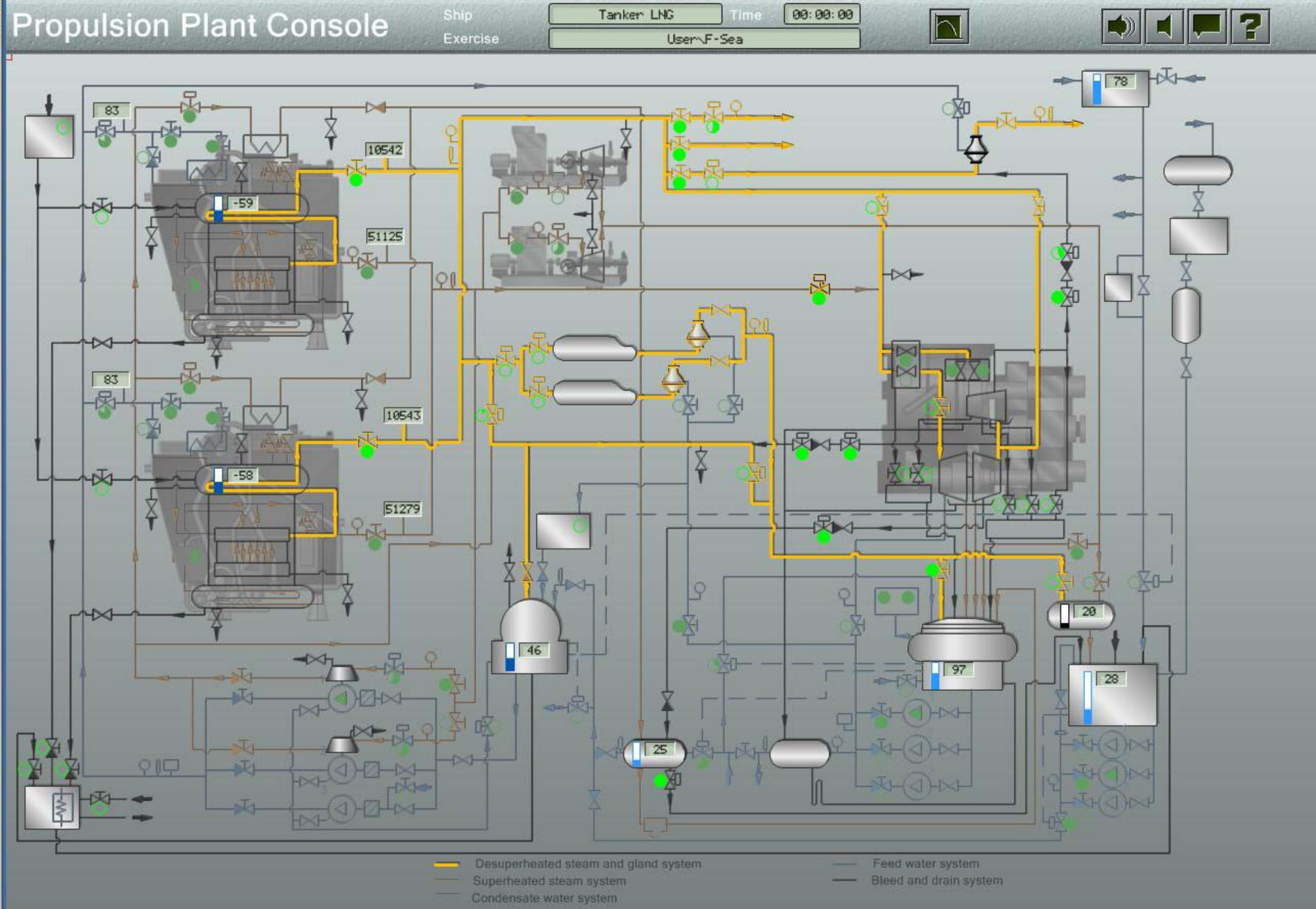
Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship
Exercise
Tanker LNG
User\F-Sea
Time
00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

85
11183
-38
51164
85
11183
-38
51172
67
49
21
19
20
60

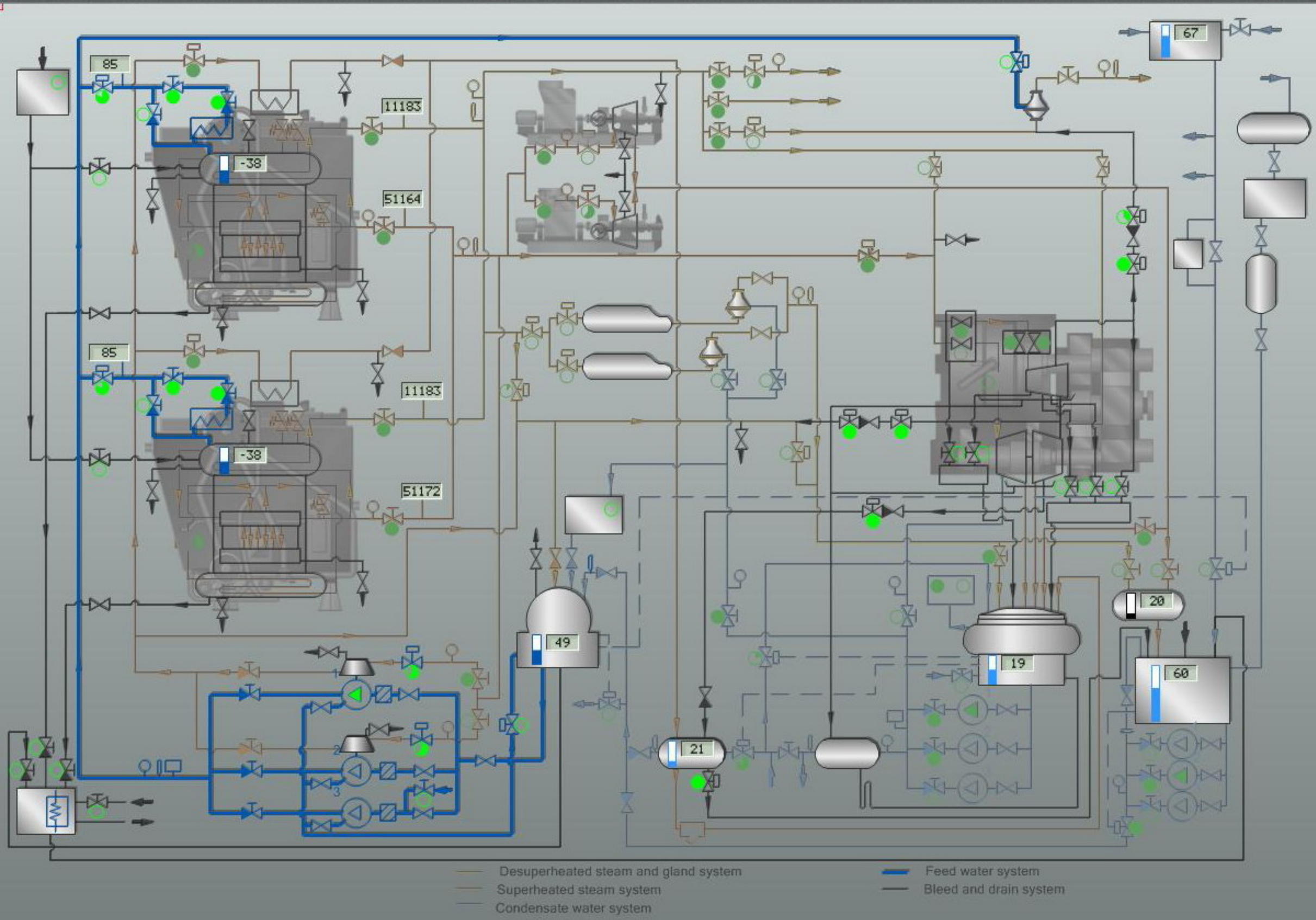
Desuperheated steam and gland system
Superheated steam system
Condensate water system
Feed water system
Bleed and drain system

Aux Condenser P High
Atmos. Drain Tk Level High
Main Condenser Level High
LP Heater Outlet T High
Atmos Drain Tk Out T High
Atmos Drain Tk Level Low
Main Condenser Level Low
Main Cond. Vacuum Low

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

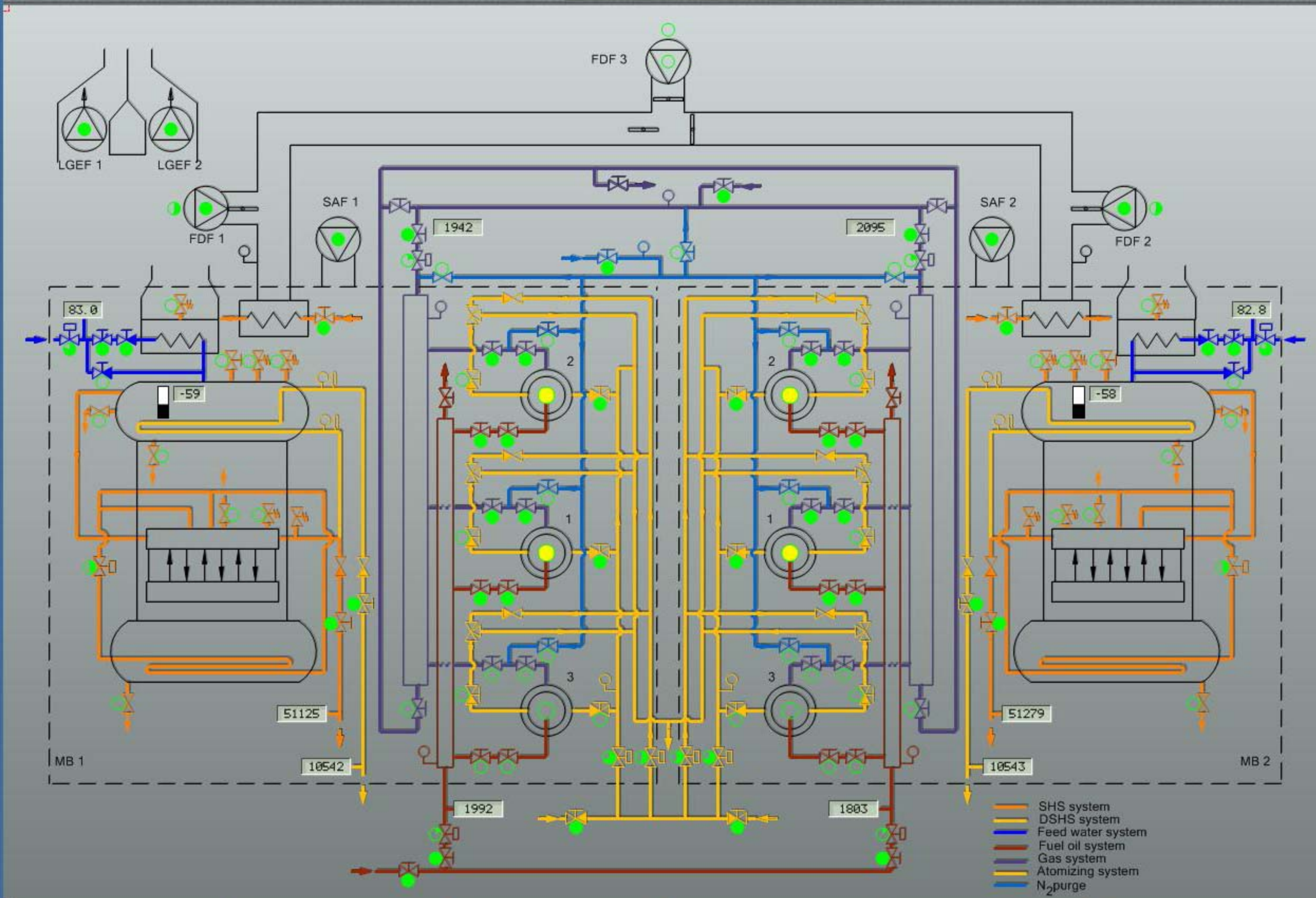
Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

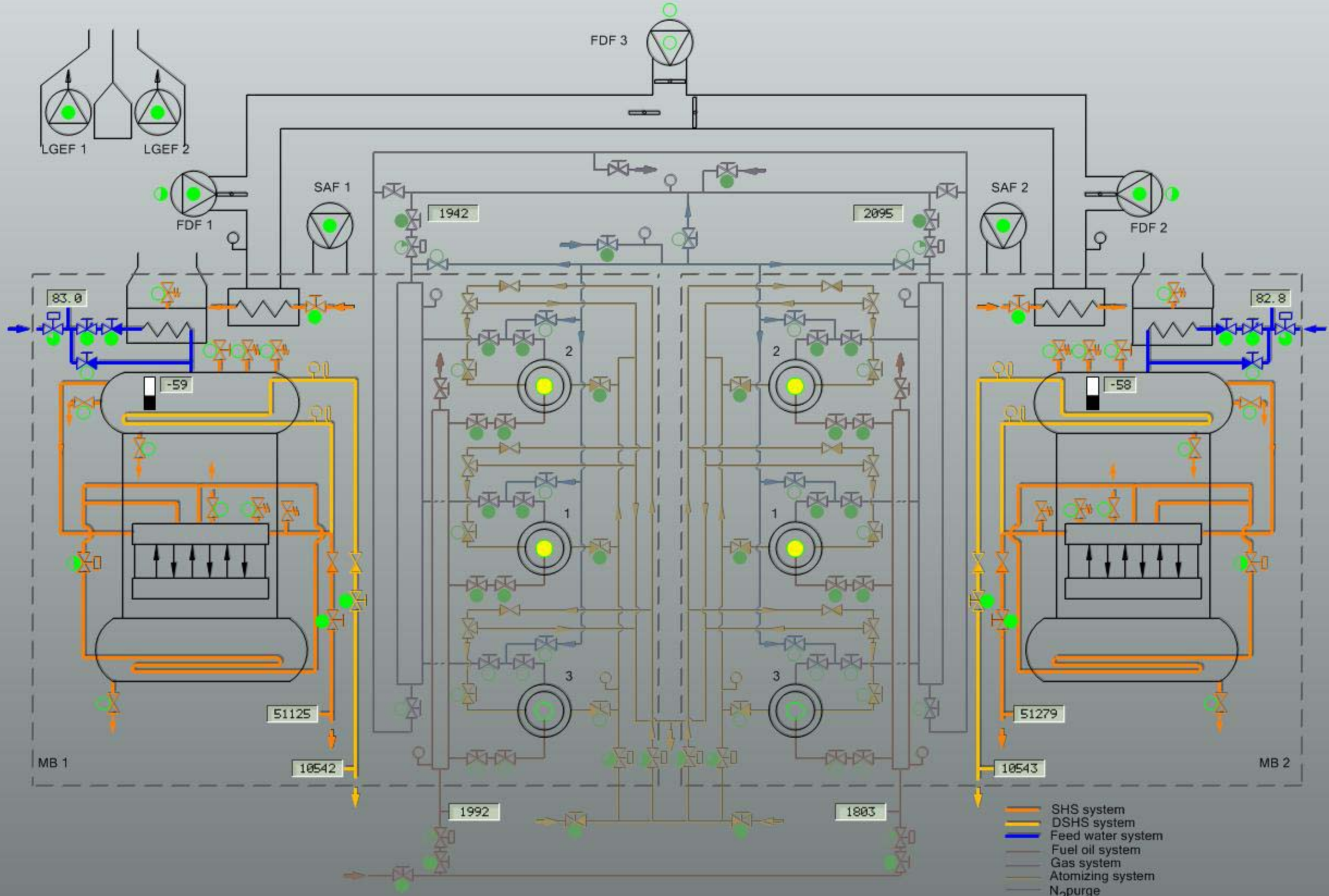
Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

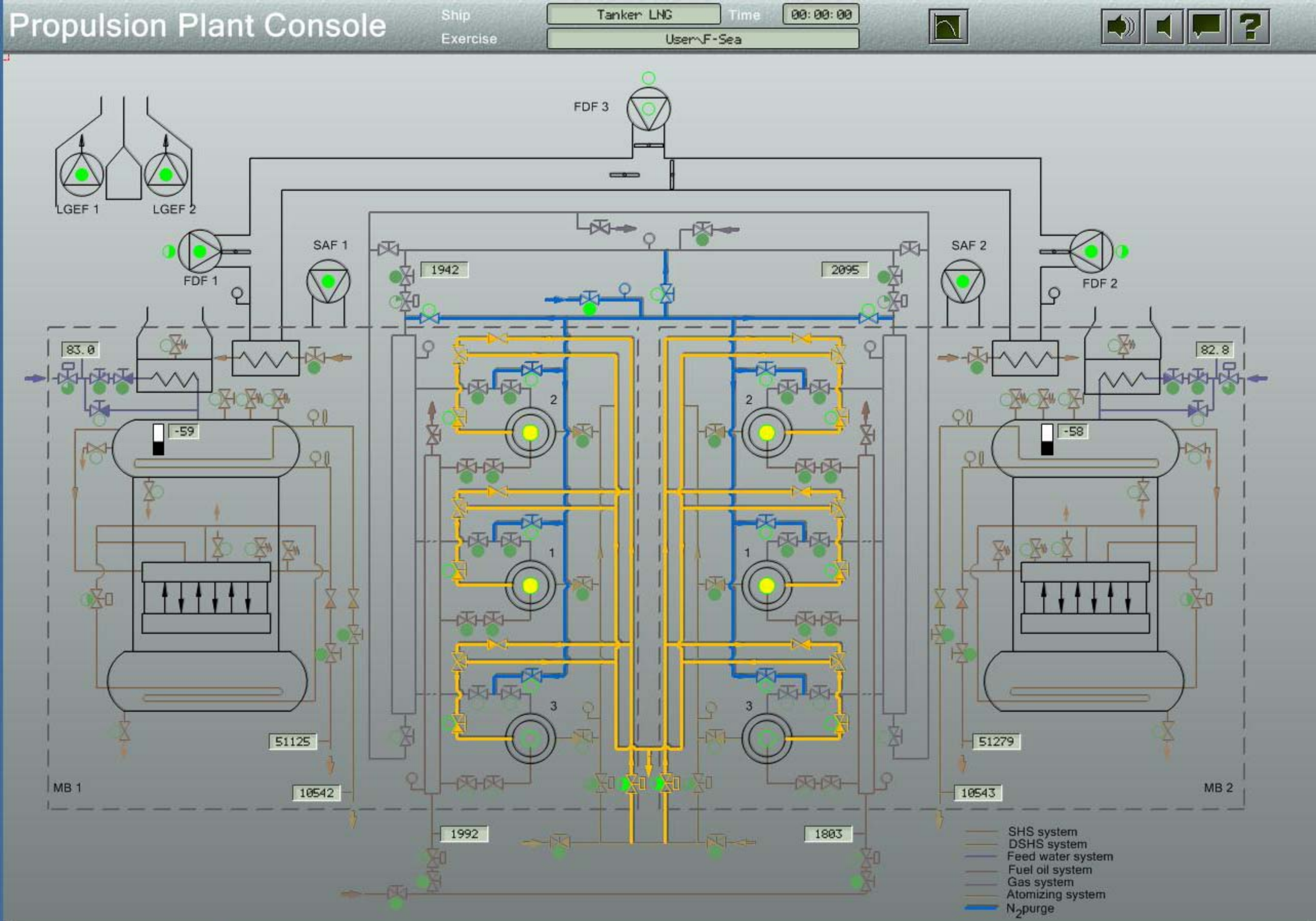
FDF 3
LGEF 1
LGEF 2
FDF 1
SAF 1
SAF 2
FDF 2
1942
2095
83.0
82.8
-59
-58
2
1
3
51125
51279
10542
10543
MB 1
MB 2
1992
1803

SHS system
DSHS system
Feed water system
Fuel oil system
Gas system
Atomizing system
N_2purge

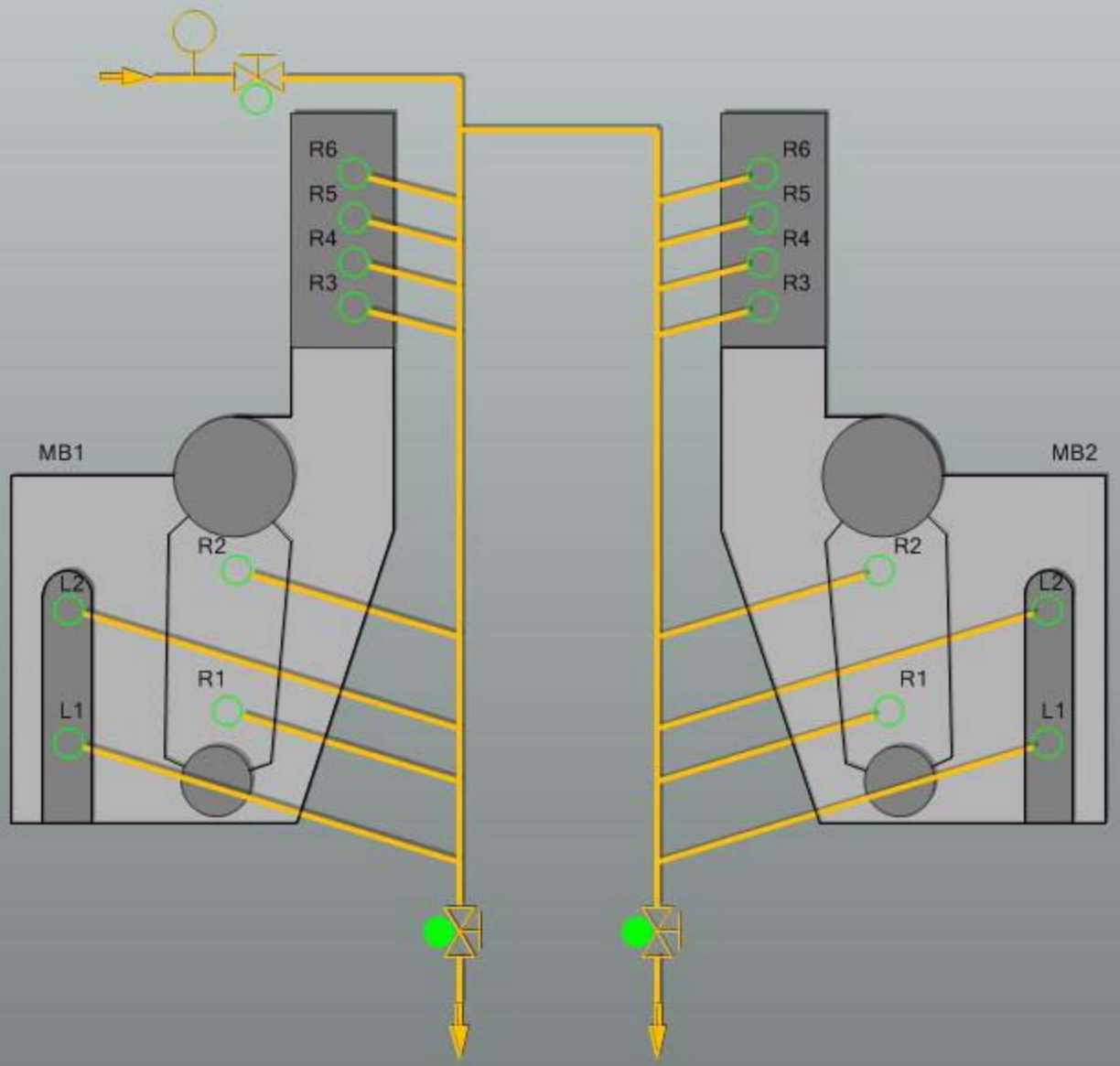
MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



MT | SCFW | MB | CS | FS | AUX | ERLC | AS



Soot Blowers System

PRESSURE

CURRENT

TIMER, sec

00:10:00

OPERATION MODE

SOOT BLOWING SEQUENCE

BOILER & ECO

ECO

LONG SOOT BLOWERS

EMCY RET RACT

BOILER 1

R1 BYPASS | R2 BYPASS | R3 BYPASS | R4 BYPASS | R5 BYPASS | R6 BYPASS

L1 BYPASS | L2 BYPASS

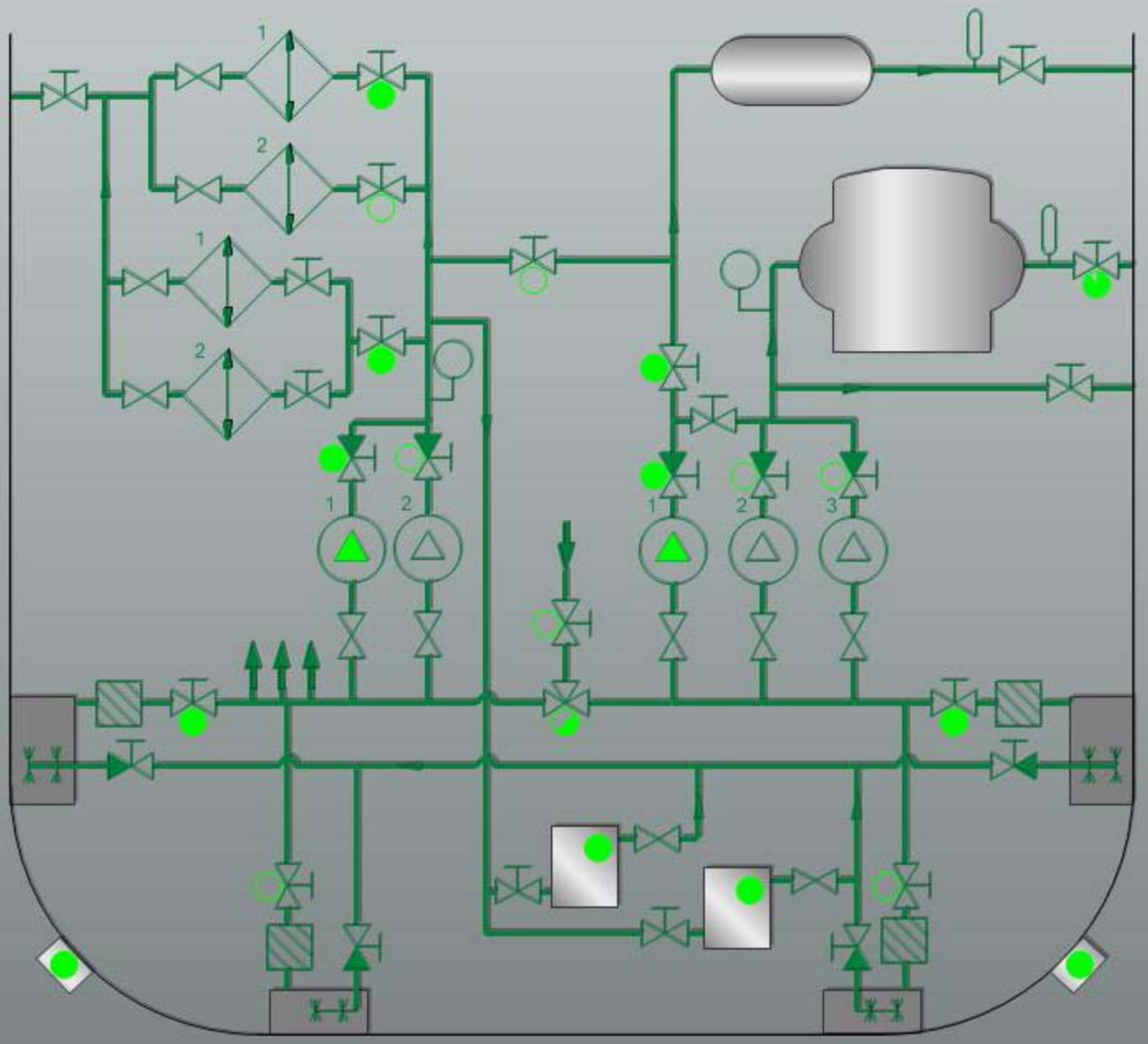
BOILER 2

R1 BYPASS | R2 BYPASS | R3 BYPASS | R4 BYPASS | R5 BYPASS | R6 BYPASS

L1 BYPASS | L2 BYPASS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



Sea Water System

MAIN CIRCULATING SYSTEM

HIGH CHEST
LOW CHEST

PUMPS CONTROL
MANUAL
AUTO

PUMP 1
NORMAL FLOW
LOW FLOW

PUMP 2
NORMAL FLOW
LOW FLOW

PUMP 3
NORMAL FLOW
LOW FLOW

PUMP DISCHARGE
bar 0 1 2 3
0.6

MAIN COND. COOLING FLOW
60 40 20 0

MAIN COND. OUTLET
50 40 30 20 10 0
°C
28

TO ATM. COND.

MIDDLE VALVE

ATM COND. OUTLET
50 40 30 20 10 0
°C
22

SW COOLING SYSTEM

HIGH CHEST
LOW CHEST

PUMPS CONTROL
MANUAL
AUTO

PUMP 1
PUMP 2

PUMP DISCHARGE
bar 0 1 2 3 4 5
1.5

SEA WATER
50 40 30 20 10 0
°C
22

TO VACUM UNIT
CNTRAL FW COOL. 1
CNTRAL FW COOL. 2

GROWTH PREVENTION

ANODE TANK 1
ANODE TANK 2

ANODIC PROTECTION

PORT
STBD

ER BILGE SUCTION

BILGE VALVE
CIRC. COOL.

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

Central Cooling FW System

MAIN CIRC. FW PUMPS

PUMP DISCHARGE

bar 0 3 6 9 12 — 2.5

MANUAL / AUTO

PUMP 1

PUMP2

TEMPERATURE CONTROL

MANUAL / AUTO

SET POINT, °C: 25 30 35 40 45 — 28

VALVE POSITION: 100 80 60 40

VALVES CONTROL

FW COOLER 1	MT LO COOLER 1	CNTRL AIR COMPR 1	ST LO COOLER 1	BYPASS VALVE
FW COOLER 2	MT LO COOLER 2	CNTRL AIR COMPR 2	SERVICE AIR COMPR	EXP. T MAKE UP

TURBINE LO COOLERS

INLET	OUTLET
°C 33	°C 40

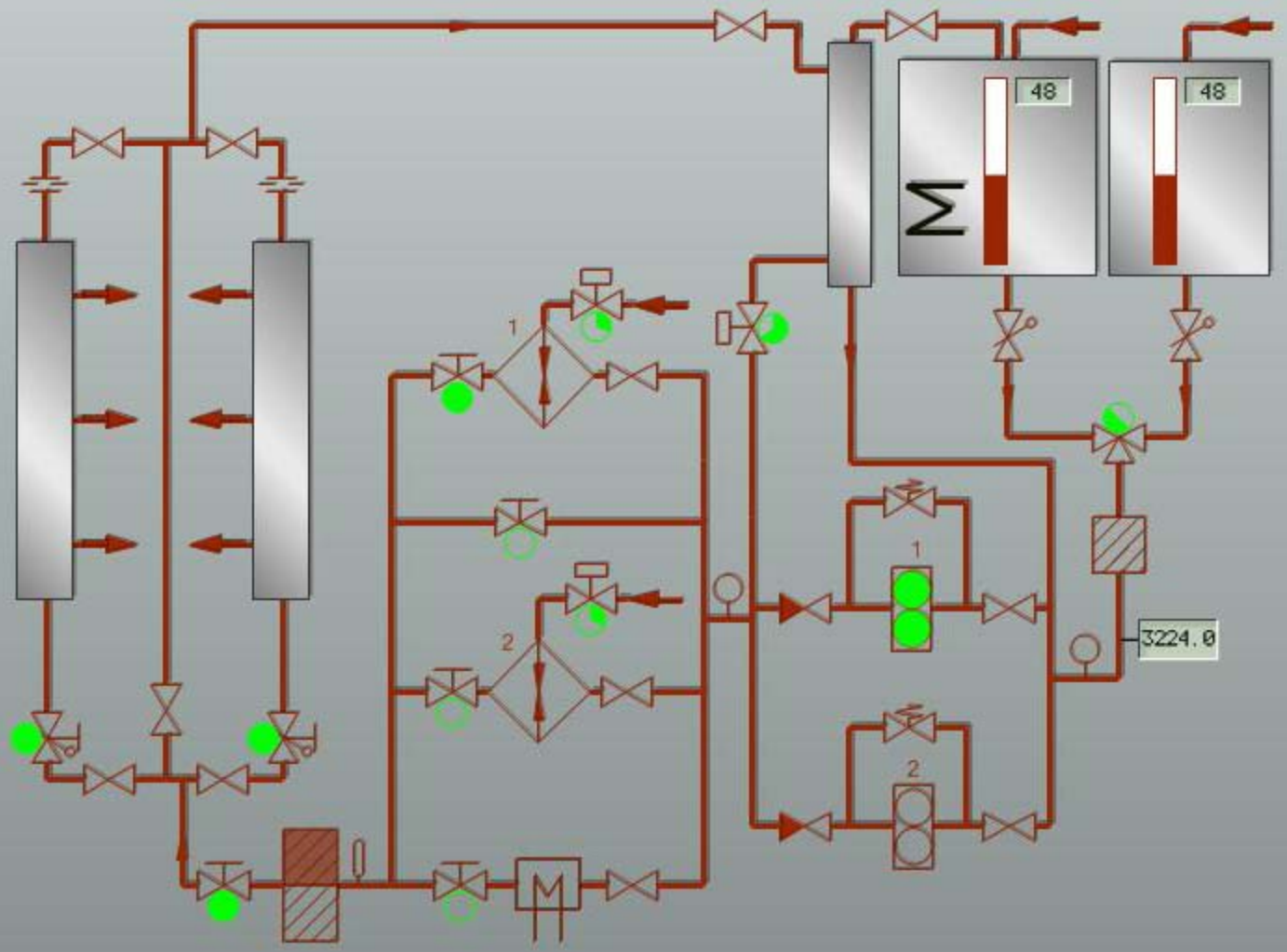
CENTRAL FW COOLERS

INLET	OUTLET
°C 34	°C 33

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



Fuel Oil Supply system

PUMP SUCTION: bar, -1 … 1, 0.45
PUMP DISCHARGE: bar, 0 … 10 … 20 … 30, 25.1
HOT FILTER DROP: bar, 0 … 1 … 2, 0.10
F1 / F2

FO PUMPS CONTROL
MANUAL / AUTO
PUMP 1
PUMP 2

FUEL SELECTION
TO BOILERS
OFF / HFO / DO

TRACING

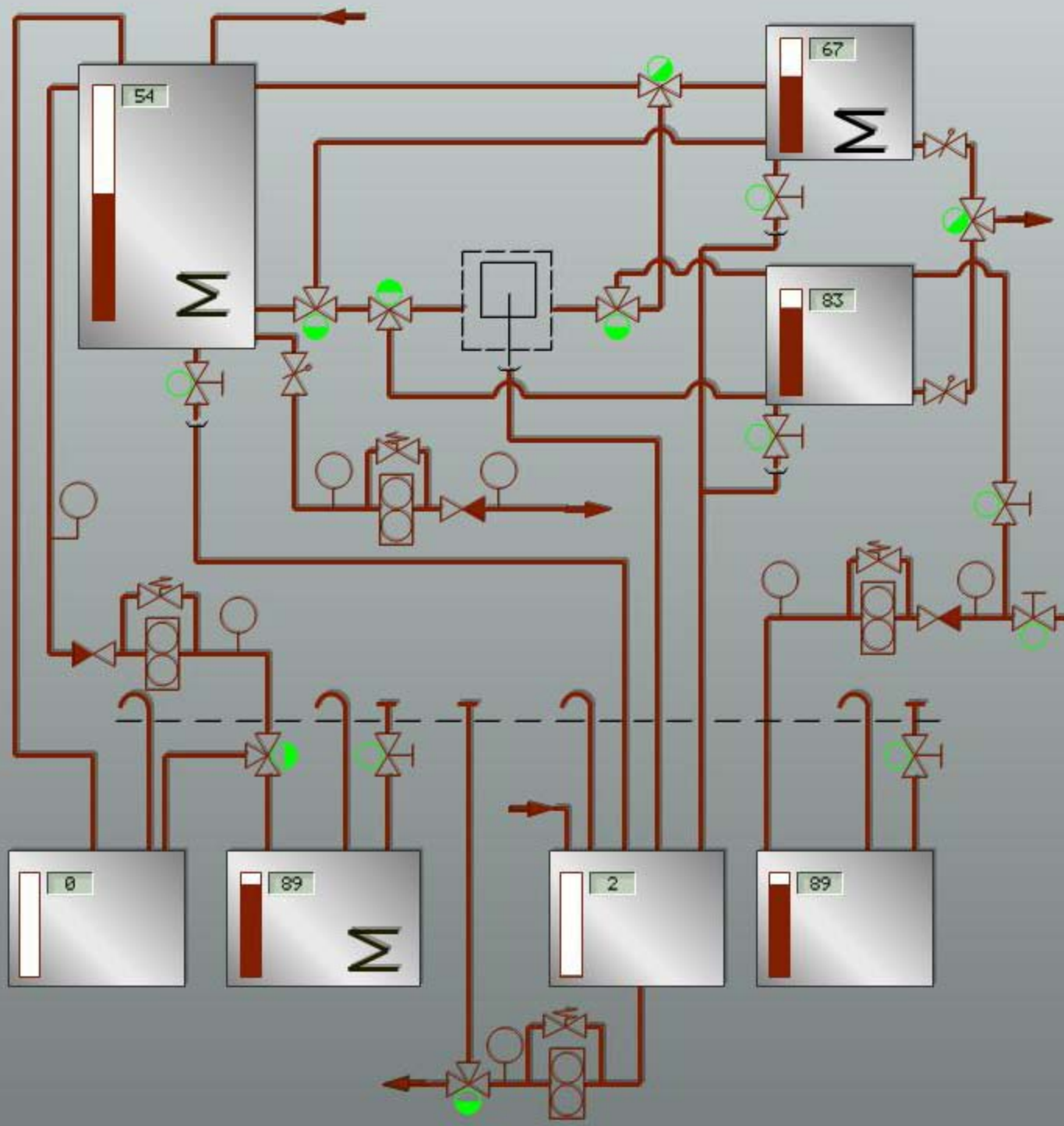
FO VISCOSITY CONTROL
MANUAL / AUTO
PRE HEATER 1
PRE HEATER 2
HEATERS BYPASS
ELECTR. PRE HEATER
STEAM VALVE POSITION
STEAM VALVE POSITION
SET POINT, cSt: 17
VISCOSITY, cSt: 17
FUEL OIL: °C, 114

HFO SERVICE TANK
°C, 74
HEATING

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00



Fuel Oil Transfer system

HFO TRANSFER PUMP 1
SUCTION: bar 0.77
DISCHARGE: bar 0.0
PUMP
TRACING

DO TRANSFER PUMP
SUCTION: bar 0.00
DISCHARGE: bar 0.0
PUMP
TO MB SERVICE TANK
TO DG SERVICE TANK

HFO TRANSFER PUMP 2
SUCTION: bar 0.00
DISCHARGE: bar 0.0
PUMP

SLUDGE TRANSFER PUMP
DISCHARGE: bar 0.0
DISCHARGE TO: SHORE / INCIN
SUCTION FROM: BUNKER / SPILL
PUMP

SEPARATION
FROM: SERV. SETT.
TO: SERV. SETT.
FUEL SELECTION: HFO / DO

DO BUNKER MAKE UP

DG FUEL SUPPLY
FUEL SELECTIONS: HFO / DO
DO SERVICE DRAIN

HFO BUNKER TANK
HEATING
°C 37
MAKE UP

HFO SETTLE TANK
HEATING
°C 55
DRAIN

HFO SERVICE TANK
HEATING
°C 89
HFO SERVICE DRAIN

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

Separators System

CONTROL AIR
OPERATING WATER
WATER ON
OPEN WATER
CLOS. WATER

SEPARATORS
POWER
SEPARATOR 1 | SEPARATOR 2 | SEPARATOR 3
10057.0 R.P.M
START
BRAKE
DIS CHARGE
MANUAL / AUTO
OPER. MODE
PURIFI CATION
CLARIFI CATION
EMERGENCY STOP
STOP
To lift glass

	INLET	OUTLET
IMPURITY CONTENTS, ppm	4207.0	389.0
WATER CONTENTS, %	1.0	0.2

BACK PRESSURE
SET POINT, bar
SEPARATOR
OPEN
CLOSE
OPEN
CLOSE
OPER WATER
TIMER, min

FEED PUMP
FLOW
ON
FUEL INLET

TEMPERATURE CONTROL
SET POINT, °C
HEA TING

Operating water
Steam
Fuel oil
Lub. oil

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

Stern Tube Lub Oil System

PUMP SUCTION: bar 0.02
PUMP DISCHARGE: bar 3.4
BEARING INLET: bar 3.1

PUMPS CONTROL
MANUAL / AUTO
PUMP 1
PUMP 2

GRAVITY TANK: 48 °C

BEARINGS
LO INLET: 33 °C
LO OUTLET: 48 °C
BEARING BODY: 69 °C

LO COOLER
COOLER BY-PASS
PUMPS BY-PASS

MAKE-UP VALVES
FWD TANK
AFT TANK
GRAVITY TANK

93
66
68
74

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

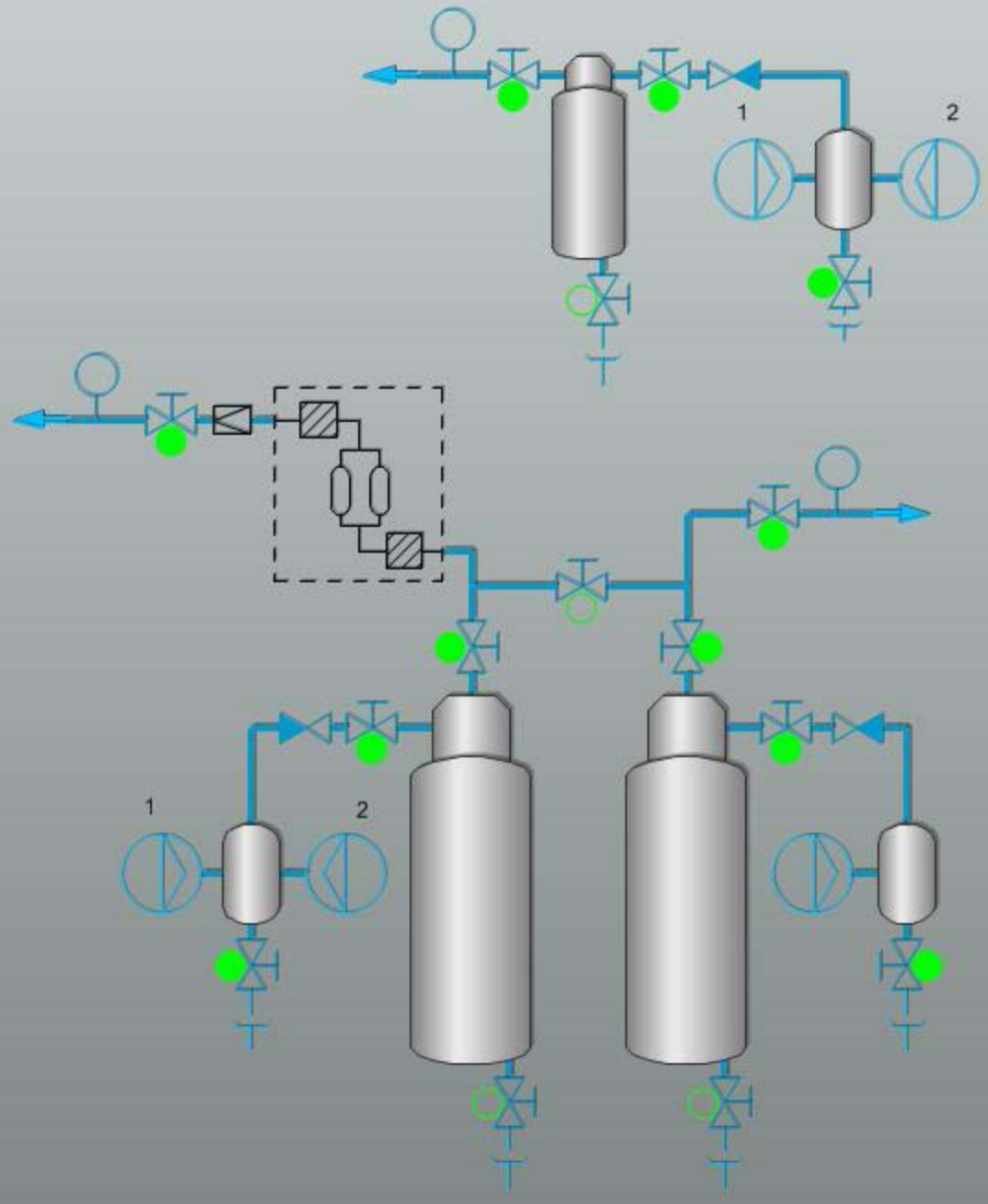
Propulsion Plant Console

Ship
Exercise

Tanker LNG

User\F-Sea

Time 00:00:00



Compressed Air System

CNTRL AIR REC.

SERVICE AIR REC.

START AIR REC.

CNTRL AIR SYSTEM

COMPRESSOR 1

MANUAL
AUTO
START STOP
FROM COMPR.
FROM RECEIV.

COMPRESSOR 2

MANUAL
AUTO
START STOP
CNTRL AIR

CONTROL AIR

SERVICE & ATOMIZING AIR SYSTEM

COMPRESSOR

MANUAL
AUTO
START STOP
FROM COMPR.
FROM RECEIV.
SERVICE AIR

SERVICE & ATOMIZING AIR

DG START AIR SYSTEM

COMPRESSOR 1

MANUAL
AUTO
START STOP
FROM COMPR.

COMPRESSOR 2

MANUAL
AUTO
START STOP
START AIR

START AIR

BLOW DOWN

CNTRL AIR RECEIV.
CNTRL AIR C. SEPARAT
SERVICE AIR RECEIV
SERVICE AIR C. SEPARAT
START AIR RECEIV.
START AIR C. SEPARAT

RELIEF V.

RELIEF VALVE

Service air Rcvr P High | Start air Rcvr P High | CNTRL air Comp safety valve | Service air Rcvr safety valve | Start air Rcvr safety valve | CNTRL air Comp 2 T High
CNTRL air Rcvr P High | Service air Comp safety valve | Start air Comp safety valve | CNTRL air Rcvr safety valve | CNTRL air Comp 1 T High | Service air Comp 1 T High

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

Cooling water
Sea water
Fresh water
Steam

DISTILLING PLANT

HEAT STEAM

SET POINT, bar: 0.9
STEAM: 0.46 bar
CW PUMP DISCHARGE: 0.0 bar
STEAM: 84 °C
HEATING: ON/OFF

COOL CONDENSATE WATER

INLET: 41 °C
OUTLET: 45 °C
FROM MAIN CONDENSER: COOL WATER VALVE
IN CONDENSER: -0.85 bar

DISTILLATE WATER

SET POINT,ppm: 1.5
DWT MAKE UP
SALINITY,ppm: 0.9
DIST.WATER: 0.0 bar

SEA WATER

FEED SEA WATER: 22 °C
EJECTOR PUMP: PUMP, SW SUPPLY
SW INLET: 4.0 bar
AFTER EJECTOR: 0.6 bar
SW SALINITY,ppm: 32000.0

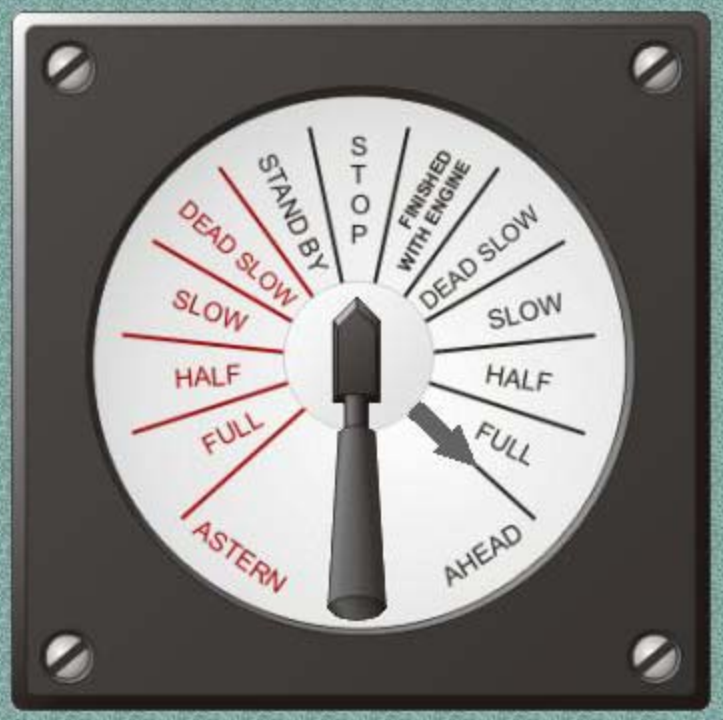
Distillate Salinity High

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User-F-Sea
Time: 00:00:00

Main Turbine Local Control



MANEUV. VALVE LIFT, %

SHAFT R.P.M.

CONTROL POS. TRANSFER

MAIN STEAM

PACKING STEAM

MAIN CON. VACUUM

H.P.T. STEAM CHEST

AST. T. STEAM CHEST

HP BLEEDER

IP BLEEDER

LP BLEEDER

LP BLEEDER VALVE

IP BLEEDER VALVE

SAFETY SYSTEM

SHUT DOWN

SHUT DOWN BYPASS

HP BLEEDER VALVE

HPT BLEEDER DRAIN VALVE

SHUTDOWN BYPASS

To lift glass

HPT CASING DRAIN VALVE

HPT 2-ND STAGE DRAIN VALVE

SAFETY RESET

To lift glass

HPT STM CHEST DRAIN VALVE

MANEUV. DRAIN VALVE

EMCY STOP

To lift glass

GEAR LO INLET

BEARING LO INLET

WARM UP VALVE

TURN GEAR

TURN ON AHEAD

TURN ON ASTERN

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

Boilers Local Control

POWER SUPPLY

DEAERATOR LEVEL, %: 46

EMCY CONTROL

COMMON BOG: 0.7 bar

N2 GAS: 1.5 bar

MASTER FO | ATOMIZ. STEAM | ATOMIZ. AIR

MASTER GAS | N2 SUPPLY

COMMON BOILERS CONTROL

STEAM DUMP CONTROL: MANUAL / AUTO, DUMP

FO RECIRC. CONTROL: MANUAL / AUTO, FO RECIRC.

ONE FAN-TWO BOILERS: NOR, FAN 1, FAN2

LEAK GAS EXTRACTION: FAN 1 | FAN 2

SEALING AIR FANS: FAN 1 | FAN 2

MAIN BOILER 1 | MAIN BOILER 2

FUEL OIL: 11.9 bar

GAS: 0.3 bar

DSH STEAM: 60 bar

SH STEAM: 60 bar

SH STEAM: 515 °C

CONTROL POSITION: REMOTE | LOCAL; REM. LOCAL

MAN. TRIP: To lift glass

FURNACE PURGE: IN PROGR. | COMPL. | REQU EST

FORCED DRAFT FAN: RUN | HIGH RUN | START | HIGH START | STOP

BOILER GAS | FO SHUT OFF | FEED WATER

STEAM UP: IN PROGR. | COMPL.

BURNER 2: FLAME ON | GAS | FO

BURNER 1: FLAME ON | GAS | FO

BURNER 3: FLAME ON | GAS | FO

FEED WATER: 79 bar

DRUM STEAM: 68 bar

ATOMIZ. STEAM: 7.8 bar

PURGE STEAM: 4.9 bar

SMOKE, %: 1

DRUM LEVEL, %unit%: -59 mm

FDF OUTLET: 14 mbar

WIND BOX: 14 mbar

FURNACE: 2 mbar

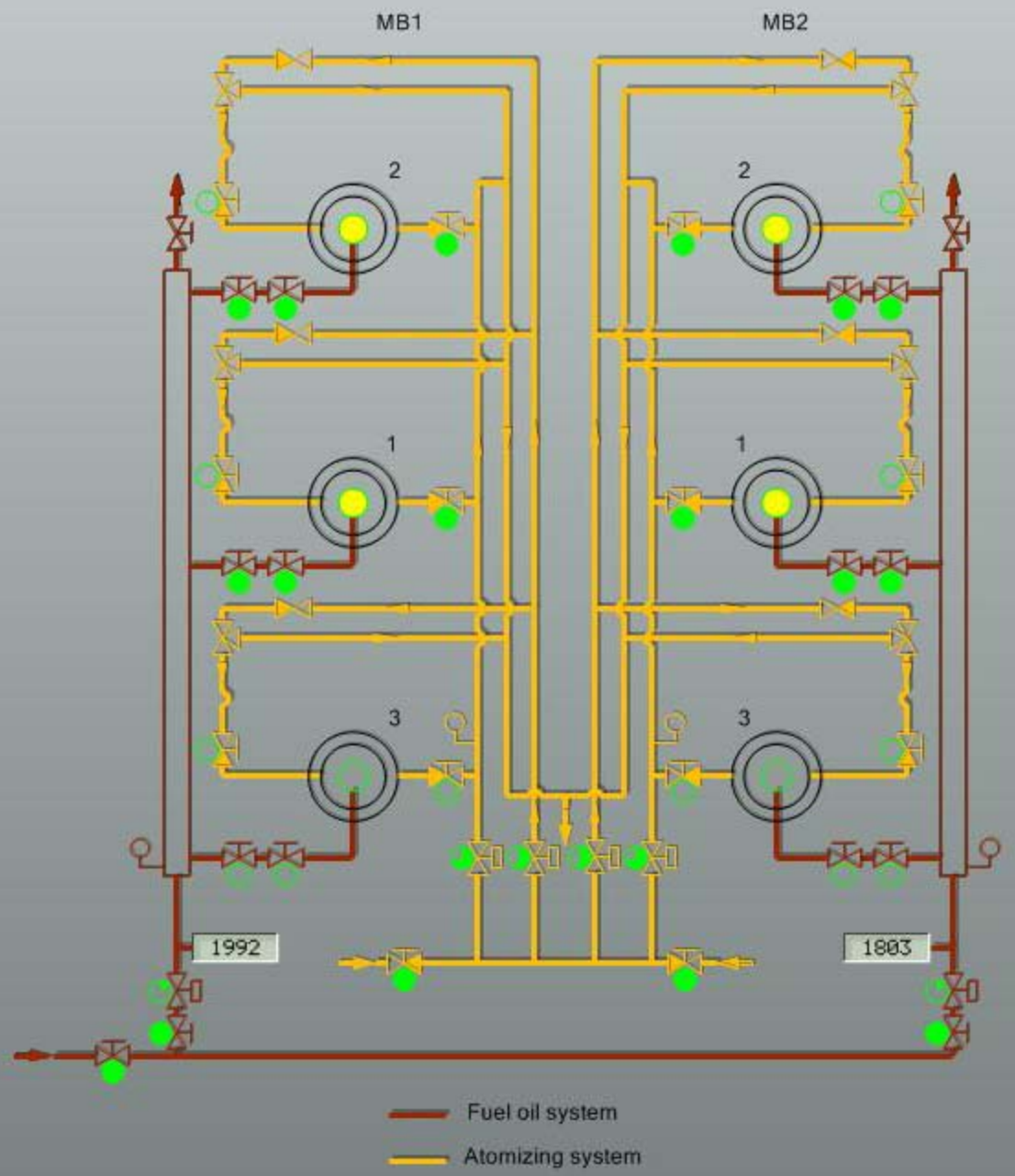
AUTOM. BOILER CONTROL

STEAM DISTRIBUTION: SH STEAM | DSH STEAM

PURGE STEAM PRESS. | ATOMIZ. STEAM PRESS. | FO FLOW CONTROL

GAS FLOW CONTROL | FW FLOW CONTROL | AIR FLOW CONTROL | STEAM TEMP. CONTROL

MT | SCFW | MB | CS | FS | AUX | ERLC | AS



Boilers Emergency Panel

COMMON EMCY MODE
NOR. EMCY

BOILER 1 EMERGENCY OPERATION PANEL

PURGE FINISH

BOILER EMCY OPER.	BURNER 2 IGNITER	BURNER 1 IGNITER	BURNER 3 IGNITER
PURGE NOR. BURN	OFF ON	OFF ON	OFF ON
FO SHUT-OFF VALVE	FO VALVE	FO VALVE	FO VALVE
CLOSE OPEN	CLOSE OPEN	CLOSE OPEN	CLOSE OPEN

BOILER 2 EMERGENCY OPERATION PANEL

PURGE FINISH

BOILER EMCY OPER.	BURNER 2 IGNITER	BURNER 1 IGNITER	BURNER 3 IGNITER
PURGE NOR. BURN	OFF ON	OFF ON	OFF ON
FO SHUT-OFF VALVE	FO VALVE	FO VALVE	FO VALVE
CLOSE OPEN	CLOSE OPEN	CLOSE OPEN	CLOSE OPEN

Propulsion Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

ALARM PANEL

MAIN TURBINE

SAFETY SYSTEM - SHUT DOWN

- MT Manual Trip
- MT-Overspeed
- MT LO P Low
- Main Cond Vacuum L L
- MB St. Drum Level H
- Main Steam P L L
- Turn Gear Engaged
- Auto Spinning-Overspeed
- MT Control Oil P Low
- Main Cond Level H H
- Main Boilers Trip
- MT Vibration H H

SAFETY SYSTEM - SLOW DOWN

- Main Steam P Low
- MB St. Drum Level Low/High
- One Boiler Trip
- Main Cond. Vacuum Low
- Main Cond Level High

ALARMS

- MT Inlet SHS P High
- MT Inlet SHS T High
- MT Gland Steam P High
- MTLO Beerings Inlet P Low
- MTLO Bearings Inlet T High
- MT LO Filter Drop High
- MT HPT Vibration High
- MT HPT Rotor Displ. High
- MT Inlet SHS P Low
- MT Inlet SHS T Low
- MT Gland Steam P Low
- MT LO Gravity Tank Level Low
- MTLO Bearings Out T High
- MT Sump Tank Level Low
- MT LPT Vibration High
- MT LPT Rotor Displ. High

DEAD MAN

- Attended ER
- Unattended ER
- ACKN
- Attended ER
- Dead Man Alarm
- Unattended ER

COMPRESSED AIR

- Service air Rcvr P High
- CNTRL air Rcvr P High
- Start air Rcvr P High
- Serv. air C. safety valve
- CNTRL air C. safety valve
- Start air C. safety valve
- CNTRL air Com.1 T High
- CNTRL air Com..2 T High
- Service Air Com. T High
- Serv. air R. safety valve
- CNTRL air R. safety valve
- Start air R. safety valve

MAIN BOILER 1

SAFETY SYSTEM - SHUT DOWN

- FO Pump Trip
- Steam Drum Level High
- FO P Low
- Flame Failure
- Manual Trip
- Steam Drum Level Low
- FDF Trip

ALARMS

- Exh. Gas T High
- Gas Header P High
- Smoke Density
- Atomizing Steam P Low
- Drum Level High
- Exh. Gas T Low
- Gas Header P Low
- FO Header P Low
- Drum Level Low

MAIN BOILER 2

SAFETY SYSTEM - SHUT DOWN

- FO Pump Trip
- Steam Drum Level High
- FO P Low
- Flame Failure
- Manual Trip
- Steam Drum Level Low
- FDF Trip

ALARMS

- Exh. Gas T High
- Gas Header P High
- Smoke Density
- Atomizing Steam P Low
- Drum Level High
- Exh. Gas T Low
- Gas Header P Low
- FO Header P Low
- Drum Level Low

N2 PURGE

- System inlet P Low

SOOT BLOWER

- System inlet P Low

STEAM, CONDENSATE & FEED WATER

- Aux. Cond. P High
- Atm. Drain. TK Level High
- Main Cond Level High
- LP Heater Outlet T High
- Atm. Drain TK Out T High
- Atm. Drain TK Level Low
- Main Cond Level Low
- Main Cond Vacuum Low
- Dearator P Low
- 2.7 Bar System P High
- Dearating Heat Level High
- Main Feed W P Low
- Steam Dump P High
- Dump Steam T High
- 10 Bar System T High
- Dearating Heat Level Low
- MB1 Outlet SHS P High
- MB2 Outlet SHS P High
- SHS T High
- FW Turbine 1 Steam P Low
- MB1 Outlet SHS P Low
- MB2 Outlet SHS P Low
- SHS T Low
- FW Turbine 2 Steam P Low

COOLING SYSTEMS

- Main Cond. Outlet T High
- SW Cool. Pump P Low
- SW Circ. Pump Autostart
- SW Cool. Pump Autostart
- SW Circ. Pump P Low
- Expansion TK Level Low
- Expansion TK Level High
- FW Cooler T High
- Fresh Water P Low
- FW Pump Autostart

FUEL SUPPLY SYSTEM

- Boiler FO Line P High
- Boiler FO Line P Low
- FO Viscosity High
- DO Service TK Level L/H
- FO Viscosity Low
- Filter Dirty
- HFO ServiceTK Level L/H
- HFO Service TK T L/H
- FO Pump Autostart

FUEL TRANSFER SYSTEM

- Sludge TK Level High
- Spill TK Level High
- HFO Settle TK Level High
- DG HFO Serv TK Level L/H
- HFO Settle TK T L/H
- DG DO Serv. TK Level L/H
- DG HFO Serv TK T L/H

SEPARATORS SYSTEM

LO SEPARATOR 1

- Water Level High
- S1 Back P Low
- S1 Vibration High
- S1 Inlet T Low/High
- Fuel Dry
- Waterlock Break

LO SEPARATOR 2

- Water Level High
- S2 Back P Low
- S2 Vibration High
- S2 Inlet T Low/High
- Fuel Dry
- Waterlock Break

FO SEPARATOR

- Water Level High
- S3 Back P Low
- S3 Vibration High
- S3 Inlet T Low/High
- Fuel Dry
- Waterlock Break

STERN TUBE

- Bearing T High
- Sump Tank Level Low
- Aft. Seal. Tank Level Low
- LO Outlet T High
- Gravity tank Level Low
- Fwd. Seal Tank Level Low

DW PLANT

- Salinity High

ACKN

MT | SCFW | MB | CS | FS | AUX | ERLC | AS

Electrical Plant Console

Ship: Tanker LNG | Time: 00:00:00
Exercise: User\F-Sea

TURBO GENERATOR 1

GENERATOR

kV 0 2 4 6 8 — 0
A 0 100 200 300 400 500 — 0
Hz 55 60 65 — 0.0
VOLTAGE
kW 0 2000 4000 — 0
kVar 0 1000 2000 3000 — 0

HEAT ING

CIRCUIT BREAKER
CON NECT
DIS CON NECT
SUPPLY 0 1

HAND DRIVE
TAKE UP

POWER
NORMAL
EMCY
SHORE

TURBINE
RUN
STOP
GOVERNOR CONTROL

DEMAGNETIZATION
To lift glass

ALARMS
LOW VOLTAGE
SHORT CIRCUIT
OVER CURRENT
REVERSE POWER
HIGH STATOR T°

TURBINE

rpm 0 1000 2000 — 0
GENERATOR R.P.M.
bar 0 20 40 60 80 — 60
STEAM PRESSURE
bar 0 1 2 3 4 5 6 — 2.5
LO PRESSURE

°C 80 70 60 50 40 30 20 10 0 — 25
LO TEMPERATURE

VIBRATION, mm/s: 0.00
ROTOR DISPLACEMENT, mm: 0.00

CONTROL
READY TO CONTROL
READY TO SYNCH.
WARM UP
PRELUBRICATION: OFF / AUTO / RUN
START
STOP
EMCY STOP

SAFETY SYSTEM
OVERSPEED
LOW LO PRESS
HIGH LO T°
HIGH WIBRA-TION
ROTOR DIS-PLACEM.
HIGH COND. LEVEL
COND. VACUUM
ON
OFF
RESET

ELECTRICAL PLANT CONTROL

PRIORITY: TG1 / DG / TG2
CONTROL MODE: MANUAL / AUTO

AUTO MODES
EQUAL
CYCLIC
OPTI-MAL
CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

TURBO GENERATOR 2

GENERATOR

kV 6.592
A 204
Hz 59.8
kW 2264
kVar 2234
VOLTAGE
HEAT ING

CIRCUIT BREAKER
CON NECT
DIS CON NECT
SUPPLY

HAND DRIVE
TAKE UP

POWER
NORMAL
EMCY
SHORE

TURBINE
RUN
STOP
GOVERNOR CONTROL

DEMAGNETIZATION
To lift glass

ALARMS
LOW VOLTAGE
SHORT CIRCUIT
OVER CURRENT
REVERSE POWER
HIGH STATOR T°

TURBINE

rpm 1794
GENERATOR R.P.M.
bar 60
STEAM PRESSURE
bar 3.5
LO PRESSURE
LO TEMPERATURE 67 °C

VIBRATION, mm/s 3.22
ROTOR DISPLACEMENT, mm 0.22

CONTROL
READY TO CONTROL
READY TO SYNCH.
WARM UP
PRELUBRICATION
START
STOP
EMCY STOP

SAFETY SYSTEM
OVERSPEED
LOW LO PRESS
HIGH LO T°
HIGH WIBRA-TION
ROTOR DIS-PLACEM.
HIGH COND. LEVEL
COND. VACUUM
ON
OFF
RESET

ELECTRICAL PLANT CONTROL

PRIORITY
CONTROL MODE
AUTO MODES
EQUAL
CYCLIC
OPTI-MAL
CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

DIESEL GENERATOR

GENERATOR

kV 6.567
A 0
Hz 59.9
VOLTAGE
kW 0
kVar 0
HEAT ING

POWER
NORMAL
EMCY
SHORE

DIESEL
RUN
STOP
GOVERNOR CONTROL

DEMAGNETIZATION
To lift glass

ALARMS
LOW VOLTAGE
SHORT CIRCUIT
OVER CURRENT
REVERSE POWER
HIGH STATOR T°
DIESEL NOT WARM-UP

CIRCUIT BREAKER
CON NECT
DIS CON NECT
SUPPLY
HAND DRIVE
TAKE UP

DIESEL

rpm 719 — R.P.M.
bar 3.5 — LO PRESSURE
bar 30.0 — START. AIR PRESSURE
bar 2.8 — FW PRESSURE
bar 2.5 — JW PRESSURE
°C 80 — JW TEMPERATURE

CONTROL
PRELUBRICATION
OFF / AUTO / RUN
START
STOP
EMCY START
EMCY STOP
PREHEATING
ON
OFF

ALARMS
START FAULT
LOW LO LEVEL
LOW FO LEVEL
LOW LO PRESS.
LOW START AIR PRESS.
SYNC. FAULT
HIGH LO T°
HIGH FW T°
HIGH EXH GAS T°

SAFETY SYSTEM
OVER SPEED
ON
LOW LO PRESS.
OFF
HIGH FW T°
RESET

ELECTRICAL PLANT CONTROL

PRIORITY: TG1 / DG / TG2
CONTROL MODE: MANUAL / AUTO

AUTO MODES
EQUAL
CYCLIC
OPTI-MAL
CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

EMERGENCY GENERATOR

GENERATOR

V 0 100 200 300 400 500 — 0
A 0 500 1000 1500 — 0
Hz 55 60 65 — 0.0

R S T

ALARMS

LOW "V" AB
LOW "V" EG
SHORT CIRCUIT
OVER CURRENT
HIGH STATOR T°

CIRCUIT BREAKER

CON NECT
DIS CON NECT
HEAT ING

SUPPLY 0 1

DIESEL

rpm 0 500 1000 — 0 — R.P.M.
bar 0 1 2 3 4 5 — 0.0 — LO PRESSURE
bar 0 1 2 3 4 5 — 0.0 — FW PRESSURE

CONTROL

READY TO START
DIESEL: START, STOP

ALARMS

START FAULT
LOW LO LEVEL
LOW FO LEVEL
LOW LO PRESS.
24 V FAULT
HIGH LO T°
HIGH FW T°
HIGH EXH GAS T°

SAFETY SYSTEM

OVER SPEED
ON
LOW LO PRESS
OFF
RESET

SHORE SUPPLY

V 0 100 200 300 400 500 — 450
A 0 400 800 1200 — 0

R S T

POWER ON

CIRCUIT BREAKER

CON NECT
DIS CON NECT

SUPPLY 0 1

ALARMS

PHASE BREAKING
SHORT CIRCUIT

PHASE INDICATORS

RIGHT
WRONG

ELECTRICAL PLANT CONTROL

PRIORITY: DG, TG1, TG2

CONTROL MODE: MANUAL, AUTO

AUTO MODES

EQUAL
CYCLIC
OPTI-MAL
CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

TURBO GENERATOR 1

TG1-TG2 | TG1-DG | TG2-DG

GENERATOR

kV 0 2 4 6 8 — 0
A 0 100 200 300 400 500 — 0
Hz 55 60 65 — 0.0
R S T
VOLTAGE
kW 0 2000 4000 — 0
kVar 0 1000 2000 3000 — 0
HEAT ING

CIRCUIT BREAKER
CON NECT | DIS CON NECT
SUPPLY 0 1

HAND DRIVE
TAKE UP

POWER
NORMAL
EMCY
SHORE

TURBINE
RUN | STOP
GOVERNOR CONTROL

DEMAGNETIZATION
To lift glass

ALARMS
LOW VOLTAGE | SHORT CIRCUIT
OVER CURRENT | REVERSE POWER
HIGH STATOR T°

TURBO GENERATOR 2

GENERATOR

kV 0 2 4 6 8 — 6.592
A 0 100 200 300 400 500 — 204
Hz 55 60 65 — 59.8
R S T
VOLTAGE
kW 0 2000 4000 — 2264
kVar 0 1000 2000 3000 — 2234
HEAT ING

CIRCUIT BREAKER
CON NECT | DIS CON NECT
SUPPLY 0 1

HAND DRIVE
TAKE UP

POWER
NORMAL
EMCY
SHORE

TURBINE
RUN | STOP
GOVERNOR CONTROL

DEMAGNETIZATION
To lift glass

ALARMS
LOW VOLTAGE | SHORT CIRCUIT
OVER CURRENT | REVERSE POWER
HIGH STATOR T°

ELECTRICAL PLANT CONTROL

PRIORITY: TG1 / DG / TG2
CONTROL MODE: MANUAL / AUTO

AUTO MODES
EQUAL
CYCLIC
OPTI-MAL
CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

SYNCHRONIZING OF TG2

GENERATOR

kV 6.592 | A 204 | Hz 59.8

VOLTAGE

kW 2264 | kVar 2234

HEAT ING

CIRCUIT BREAKER

CON NECT | DIS CON NECT

SUPPLY

HAND DRIVE

TAKE UP

POWER

NORMAL | EMCY | SHORE

TURBINE

RUN | STOP

GOVERNOR CONTROL

DEMAGNETIZATION

To lift glass

ALARMS

LOW VOLTAGE | SHORT CIRCUIT | OVER CURRENT | REVERSE POWER | HIGH STATOR T°

SYNCHRONIZING

kV 6.090 | kV 6.090

MANUAL / AUTO

OFF | TG1 | TG2 | DG

Hz 59.8 | Hz 59.8

TOO FAST / TOO SLOW

SYNCHROSCOPE

TURBO GENERATOR 1

kW 0

CIRCUIT BREAKER

CON NECT | DIS CON NECT

GOVERNOR CONTROL

DIESEL GENERATOR

kW 0

CIRCUIT BREAKER

CON NECT | DIS CON NECT

GOVERNOR CONTROL

ELECTRICAL PLANT CONTROL

PRIORITY: TG1 / DG / TG2

CONTROL MODE: MANUAL / AUTO

AUTO MODES

EQUAL | CYCLIC | OPTI-MAL | CONST FREQ.

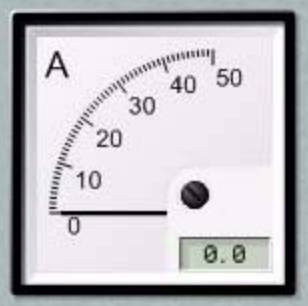
TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

MAIN SWITCHBOARD

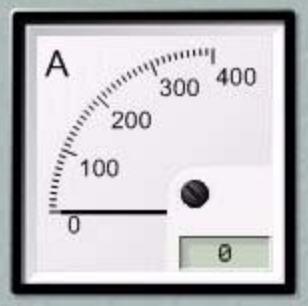
MSBD 6600-1



BALLAST PUMP 1

HEAT ING

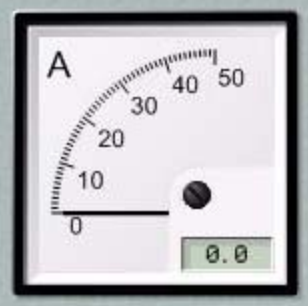
MSBD 6600-2



BOW THRUSTER

HEAT ING

MSBD 6600-3



BALLAST PUMP 2

HEAT ING

ELECTRICAL PLANT CONTROL

PRIORITY

CONTROL MODE

AUTO MODES

EQUAL

CYCLIC

OPTI-MAL

CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

MAIN SWITCHBOARD

SBD 440-1

MB1 - FD FAN1
MB1 - SEAL FAN1
LEAK GAS EXTR. FAN1
MB AUX. FD FAN3
HFO TRANSF. PUMP2
W.DESAL. PLANT
DRAIN TANK DR.PUMP1
AUX.FEED W.PUMP
MT LO PUMP1
VAC.UNIT PUMP1
DO TRANSF. PUMP
REF. PLANT
RANGES
SWITCH-BOARD 4
M.CIRC. SW PUMP1
M.COND. PUMP1
M.COOL. SW PUMP1
LO SEPARA-TOR1
CNTRL AIR COMPR.1
C.COOL. FW PUMP1
MB FO PUMP1
FIRE PUMP1
HEAT ING

SBD 440-2

MB2 - SEAL FAN2
LEAK GAS EXTR. FAN2
MB FO HEATER
MB FO PUMP2
MB2 - FD FAN2
CNTRL AIR - COMPR.2
SHIP VENT.
MT TURN GEAR
VAC.UNIT PUMP2
M.COOL. SW PUMP2
M.CIRC. SW PUMP2
M.CIRC. SW PUMP3
DRAIN TANK DR.PUMP2
M.COND. AUX.PUMP
FIRE PUMP2
C.COOL. FW PUMP2
M.COND. PUMP2
MT LO PUMP2
SWITCH-BOARD 5
ST.GEAR PUMP2
BILGE W. PUMP
WARP WINCH
FO SEPARA-TOR
LO SEPARA-TOR2
HEAT ING

ELECTRICAL PLANT CONTROL

PRIORITY: TG1 / DG / TG2

CONTROL MODE: MANUAL / AUTO

AUTO MODES

- EQUAL
- CYCLIC
- OPTI-MAL
- CONST FREQ.

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

MAIN SWITCHBOARD

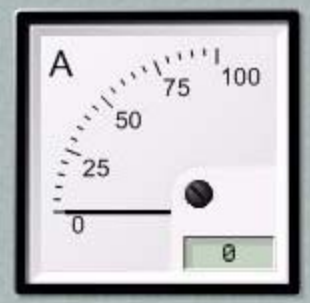
SBD 220-1

MBs CNTRL MAIN

COMMON LIGHTS

HEAT ING

SBD 220-2



MBs CNTRL RESERVE

SWITCH-BOARD 6

HEAT ING

EARTH

ELECTRICAL PLANT CONTROL

PRIORITY

CONTROL MODE

AUTO MODES

EQUAL

CYCLIC

OPTI-MAL

CONST FREQ.

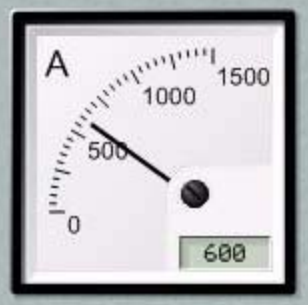
TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

EMERGENCY SWITCHBOARD

ESBD 440



SERVICE AIR - COMPR. | ST. GEAR PUMP1 | RADIO EQUIP- MENT | M.S. VENT. | BAT- TERY CHARG. | CARGO MACHI- NERY | CARGO PUMPS: CP10 | CP20 | CP30 | CP40

HEAT ING

ESBD 24V DC

MT AUTOMATION | MT SAFETY SYSTEM | GENSETS AUTOMATION | SWITCH- BOARD 8

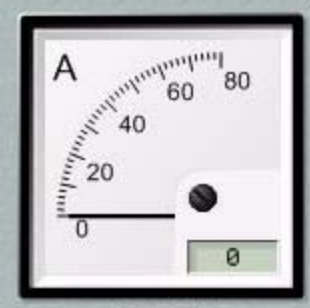
HEAT ING

ESBD 220

NAV. EQUIPMENT | NAV. LIGHTS | TELEGRAPH SYSTEM | GAS DETECT. SYSTEM | EMCY LIGHTS | SWITCH- BOARD 7

HEAT ING

BATTERY CHARGING, 24V DC



BATTERY

BATTERY

CHARGING CURRENT

FAN: ON | OFF

OVER CURRENT

BATTERY 1

BATTERY 2

BATTERY 3

BATTERY 4

ELECTRICAL PLANT CONTROL

PRIORITY

CONTROL MODE

AUTO MODES

EQUAL

CYCLIC

OPTI- MAL

CONST FREQ.

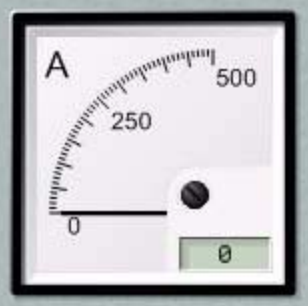
TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

CARGO SWITCHBOARD

CSBD 6600-1

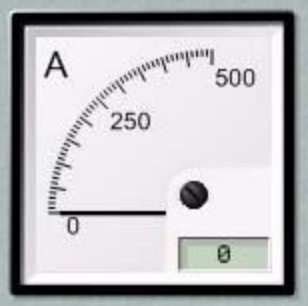


CARGO PUMPS

CP11 CP21 CP31 CP41 HD COMPR.1

HEAT ING

CSBD 6600-2

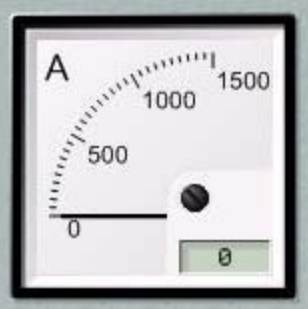


CARGO PUMPS

CP12 CP22 CP32 CP42 HD COMPR.2

HEAT ING

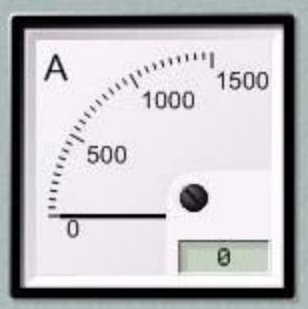
CSBD 440-1



C.LD COMPR.1 IGP - IPF1 IGP - C.IC1 IGP - C.ICOM1 IGP - B.IB1 IGP - P.HIP1 IGP - B.IB3 CARGO PUMPS CPS1 CPS3

HEAT ING

CSBD 440-2



C.LD COMPR.2 IGP - IPF2 IGP - C.IC2 IGP - C.ICOM2 IGP - B.IB2 IGP - C.IREF CARGO PUMPS CPS2 CPS4

HEAT ING

ELECTRICAL PLANT CONTROL

PRIORITY: TG1 / DG / TG2

CONTROL MODE: MANUAL / AUTO

AUTO MODES

EQUAL

CYCLIC

OPTI-MAL

CONST FREQ.

TG1 TG2 DG EG Shar Syn MSB1 MSB2 MSB3 ESB CSB MCD AS

Electrical Plant Console

Ship
Exercise
Tanker LNG
User\F-Sea
Time
00:00:00

MAIN CIRCUIT

Turbine 1
Hz=0
V=0
I=0
kW=0
TG1
CBTG1
Diesel
Hz=60
V=6567
I=0
kW=0
DG
CBDG
M
CBBT
I=0
Turbine 2
Hz=60
V=6592
I=204
kW=1625
TG2
CBTG2
MBB1-6.6kV
V=6089
I=0
CB1
V=6089
I=0
MBB 2-6.6kV
CB2
MBB 3-6.6kV
V=6089
I=0
CB4
CB5
CB3
CB6
CB7
CargoBB1-6.6kV
V=6089
I=0
CargoBB 1-440V
V=415
I=0
CargoBB2-440V
V=415
I=0
CargoBB2-6.6kV
V=6089
I=0
T1
CB8
CB9
CB10
CB11
T2
T3
T4
BB 1-440V
V=415
I=1703
EmBB-440V
V=449
I=611
CBE2
V=415
I=1861
BB2-440V
CB12
CBE1
CBE3
CBE4
CBE5
CB13
T5
T7
T8
T9
T6
V=212
I=336
BB1-220V
V=24
I=158
CBE6
EmBB-24V
V=230
I=526
EmBB-220V
CBEG
CBSS
V=212
I=7
BB2-220V
CBE7
Battery
EG
EDiesel
Shore

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Electrical Plant Console

Ship: Tanker LNG
Exercise: User\F-Sea
Time: 00:00:00

ALARM STATION

TURBO GENERATOR 1

LOW VOLTAGE | SHORT CIRCUIT | OVERSPEED | LOW LO PRESS | HIGH LO T°
OVER CURRENT | REVERSE POWER | HIGH WIBRA-TION | ROTOR DIS-PLACEM.
HIGH STATOR T° | HIGH COND LEVEL | COND VACUUM

DIESEL GENERATOR

LOW VOLTAGE | SHORT CIRCUIT | START FAULT | LOW LO LEVEL | LOW FO LEVEL | OVER SPEED
OVER CURRENT | REVERSE POWER | LOW LO PRESS. | LOW START AIR PRESS. | SYNC FAULT | LOW LO PRESS.
HIGH STATOR T° | DIESEL NOT WARM-UP | HIGH LO T° | HIGH FW T° | HIGH EXH GAS T° | HIGH FW T°

TURBO GENERATOR 2

LOW VOLTAGE | SHORT CIRCUIT | OVERSPEED | LOW LO PRESS | HIGH LO T°
OVER CURRENT | REVERSE POWER | HIGH WIBRA-TION | ROTOR DIS-PLACEM.
HIGH STATOR T° | HIGH COND LEVEL | COND VACUUM

EMERGENCY GENERATOR

LOW "V" AB | LOW "V" EG | START FAULT | LOW LO LEVEL | LOW FO LEVEL | OVER SPEED
SHORT CIRCUIT | OVER CURRENT | LOW LO PRESS. | 24 V FAULT | LOW LO PRESS.
HIGH STATOR T° | HIGH LO T° | HIGH FW T° | HIGH EXH GAS T°

SHORE SUPPLY

PHASE BREAKING | SHORT CIRCUIT

CHARGING

OVER CURRENT

ACKN

TG1 | TG2 | DG | EG | Shar | Syn | MSB1 | MSB2 | MSB3 | ESB | CSB | MCD | AS

Auxiliary Machinery Console

Ship
Exercise

Tanker LNG
User\F-Sea

Time 00:00:00

PORT

WBT 6 WBT 5 WBT 4 WBT 3 WBT 2 WBT 1

AFT WBT

FWD WBT

BV3 BV6 BV7 BVE1 BVE2 BV5 BV2 BV1 APBTV

BV4 FPBTV BV14

BV9 BV11 BV12 BV8 APTBV

BV15 BVE2 BVE1S BV17 BV13 BV16

BTV6 BTV5 BTV4 BTV3 BTV2 BTV1

STBD

Ballast System

DRAFT AFT 7.36 m | TRIM 0.00 deg | DRAFT FWD 7.36 m

HEEL PS 0.00 deg | HEEL SB 0.00 deg

BALLAST PUMP 1 — SUCTION / DISCHARGE — POWER START STOP

BALLAST PUMP 2 — SUCTION / DISCHARGE — POWER START STOP

EDUCT.1 INPUT | ED.1 DISCHARGE | ED.1 SUCTION | BVE 1P | BVE 2P

EDUCT.2 INPUT | ED.2 DISCHARGE | ED.2 SUCTION | BVE 1S | BVE 2S

BV1 BV2 BV3 BV4 BV6 BV8 BV11 BV12 BV13 BV14 BV16 BV9

APBTV-P APBTV-S

BTV6-P BTV5-P BTV4-P BTV3-P BTV2-P BTV1-P BV5 BV 7 FPBTV

BTV6-S BTV5-S BTV4-S BTV3-S BTV2-S BTV1-S BV 15 BV 17

BS STS BW SG INC FA CO2 FM PC AC AS

Auxiliary Machinery Console

Ship
Exercise

Tanker LNG

Time 00:00:00

User\F-Sea

Sewage Treatment System

DISCHARGE PUMPS

SUCTION

DISCHARGE

PUMP 1

PUMP 2

MANUAL AUTO

SUCTION

DISCHAR

SEA WATER

AERAT. TANK

CLARIF. TANK

CHLORIN. TANK

TRANSFER PUMP

SUCTION

DISCHARGE

PUMP

SUCTION

DISCHAR

CLOSE DISC SHORE

PLANT TO SEA

AIR COMPRESSORS

DISCHARGE

COMPR 1

COMPR. 2

MANUAL AUTO

SLUDGE RETURN

PRESSURE CONTROL

AERATING

SCUM RETURN

DRAIN

HOSPITAL

CLOSE PLANT SEA

GALLEY

CLOSE TANK SEA

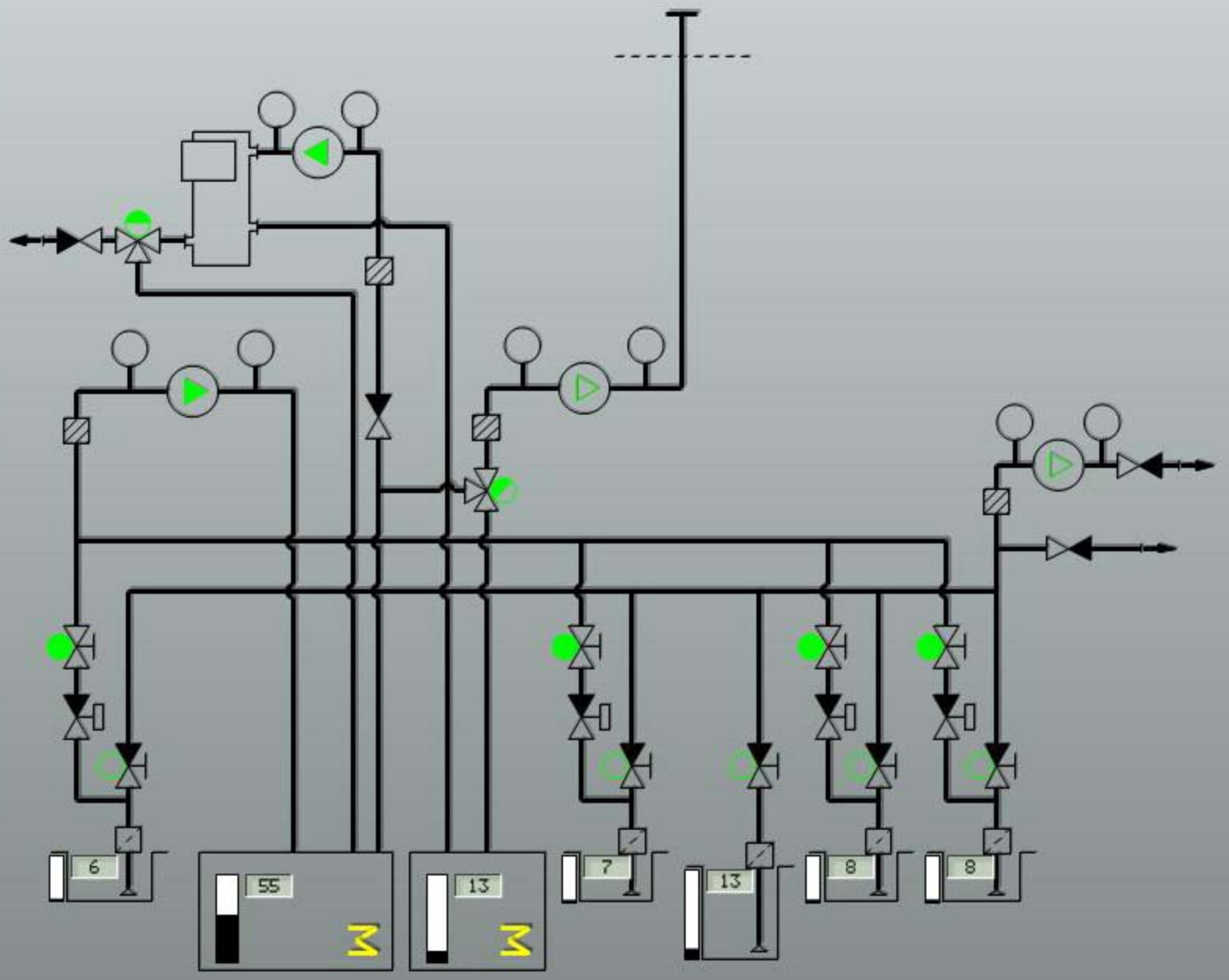
SOIL

CLOSE PLANT SEA

PLANT TANK

OVER BOARD VALVE

BS | STS | BW | SG | INC | FA | CO2 | FM | PC | AC | AS



Bilge Water System

RECIPROCATING PUMP
SUCTION
bar
-0.1
DISCHARGE
bar
0.3

BILGE PUMP
SUCTION
bar
0.0
DISCHARGE
bar
0.0

MANUAL
AUTO
PUMP

HEATING BILGE TANKS
HOLD TANK
OIL TANK

PUMP

SUCTION FROM WELL
AFT
MID
FWD SB
FWD PS

HOLD TK
°C
46

OIL TK
°C
79

SUCTION FROM WELL
AFT
MID
FWD SB
FWD PS
SUNKEN

BILGE SEPARATOR
SUCTION
bar
-0.2
DISCHARGE
bar
0.5

TRANSFER PUMP
SUCTION
bar
0.0
DISCHARGE
bar
0.0

OIL CONTENT
SET POINT,ppm
15

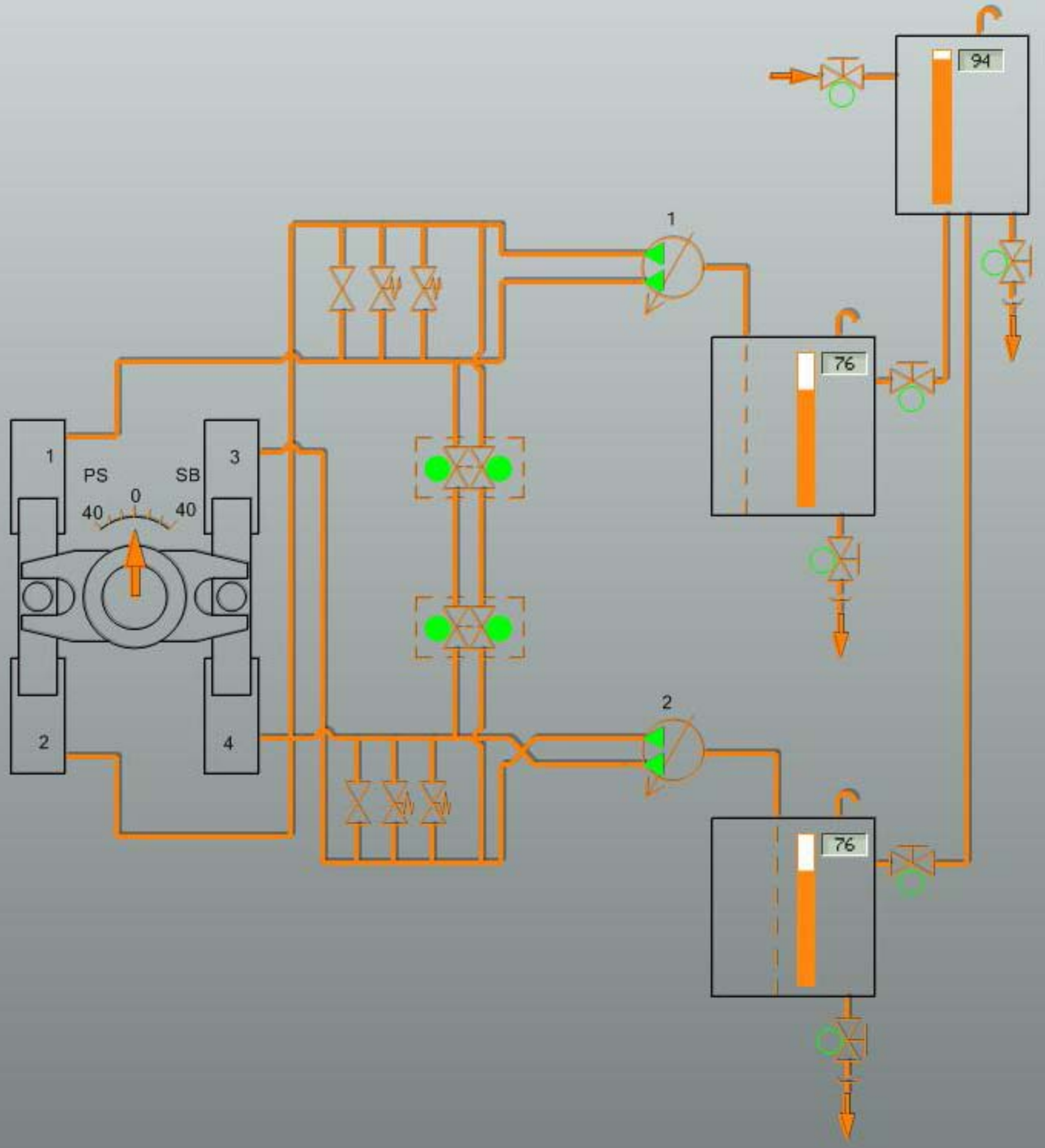
RUN

OIL CONTENT,ppm
6

SUCTION FROM
BILGE TK
HOLD
OIL

PUMP

BS | STS | BW | SG | INC | FA | CO2 | FM | PC | AC | AS



Steering Gear System

RUDDER ANGLE

PUMP 1

PUMP 2

CONTROL MODE

CONTROL POWER

LOCAL

REMOTE

LOCAL

OIL STORAGE TANK

MAKE UP

DRAIN

PUMP UNIT 1

POWER

PUMP CONTROL

RUN

START

STOP

RUDDER CONTROL

PS

OFF

SB

OIL TANK

MAKE UP

DRAIN

PUMP UNIT 2

POWER

PUMP CONTROL

RUN

START

STOP

RUDDER CONTROL

PS

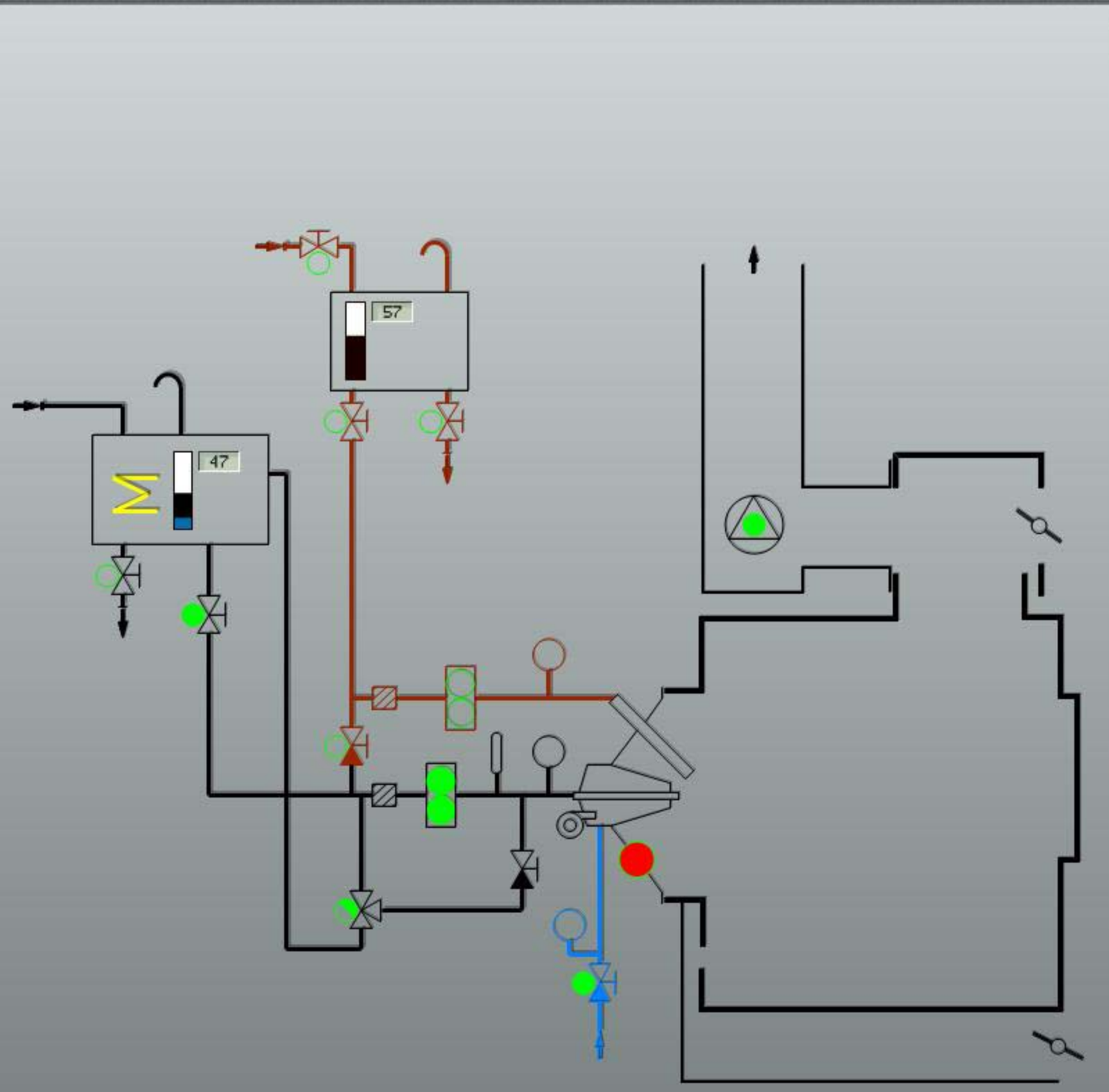
OFF

SB

OIL TANK

MAKE UP

DRAIN



Incinerator Plant

ATOMIZING AIR
bar
5.0
ON

DO PUMP
bar
0.0
PUMP

WASTE INLET
°C
100

WO PUMP
bar
0.3
PUMP

RETURN
SUCT
TANK

WO TANK
HEAT
DRAIN
WO SUCTION
°C
100

INCINERATOR
RUN
START
STOP

FURNACE, °C
870
EXH GAS, °C
252
AIR DAMPER
70
DILUTION DAMPER
60

IGNITION BURNER
RUN
ON
OFF

SHUT DOWN
RESET

DO TANK
MAKE UP
DRAIN
DO SUCTION

ALARM PANEL
FAN FAILURE
BURNER FAILURE
MISFIRE
FURNACE OVERHEAT
FURNACE T LOW
EXH GAS T HIGH
WO T LOW
WO TK LEVEL LOW
WO TK LEVEL HIGH
DO TK LEVEL LOW
DO TK LEVEL HIGH
ACKN

DOOR CONTROL
DOOR OPEN
CHARGEABLE
CHARGE
CLOSE
OPEN

MAIN BURNER
RUN
ON
OFF
DO to MB

Incinerator Failure

Fire Alarm Station

GENERAL ALARM

CO2 TO ENGINE ROOM

bar 0 20 40 60 0

START
to lift glass

MAIN VALVE
to lift glass

READY

FIRE PUMPS

bar 0 2 4 6 8 10 0

POWER 1
PUMP 1

POWER 2
PUMP 2

FIRE DOORS
CLOSE

FANS
STOP

CUT OFF VALVES
CLOSE

FO & LO PUMPS
STOP

FIRE DAMPERS
CLOSE

POWER

FIRE

FAULT

MAIN SUPPLY
EMCY SUPPLY

ACKN

ALARM MUTE

FAULT
SECTION OFF
SECTION FAULT
MAIN SUPPLY FAULT
EMCY SUPPLY FAULT

TEST PANEL 1
FIRE
FAULT
SECTION
ON
OFF

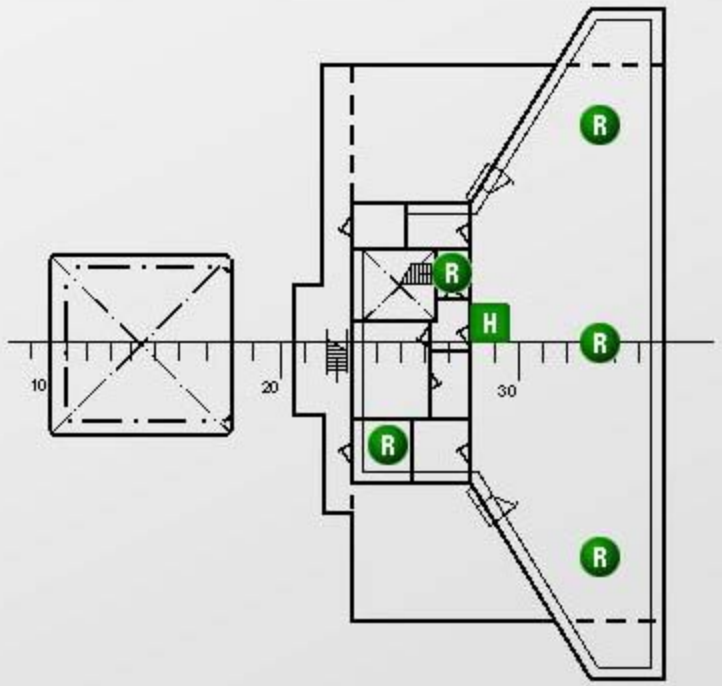
TEST PANEL 2
FIRE
FAULT
SECTION
ON
OFF

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15 16

Bridge deck

1



BS STS BW SG INC FA CO2 FM PC AC AS

CO_2 Station

Start
Main Valve

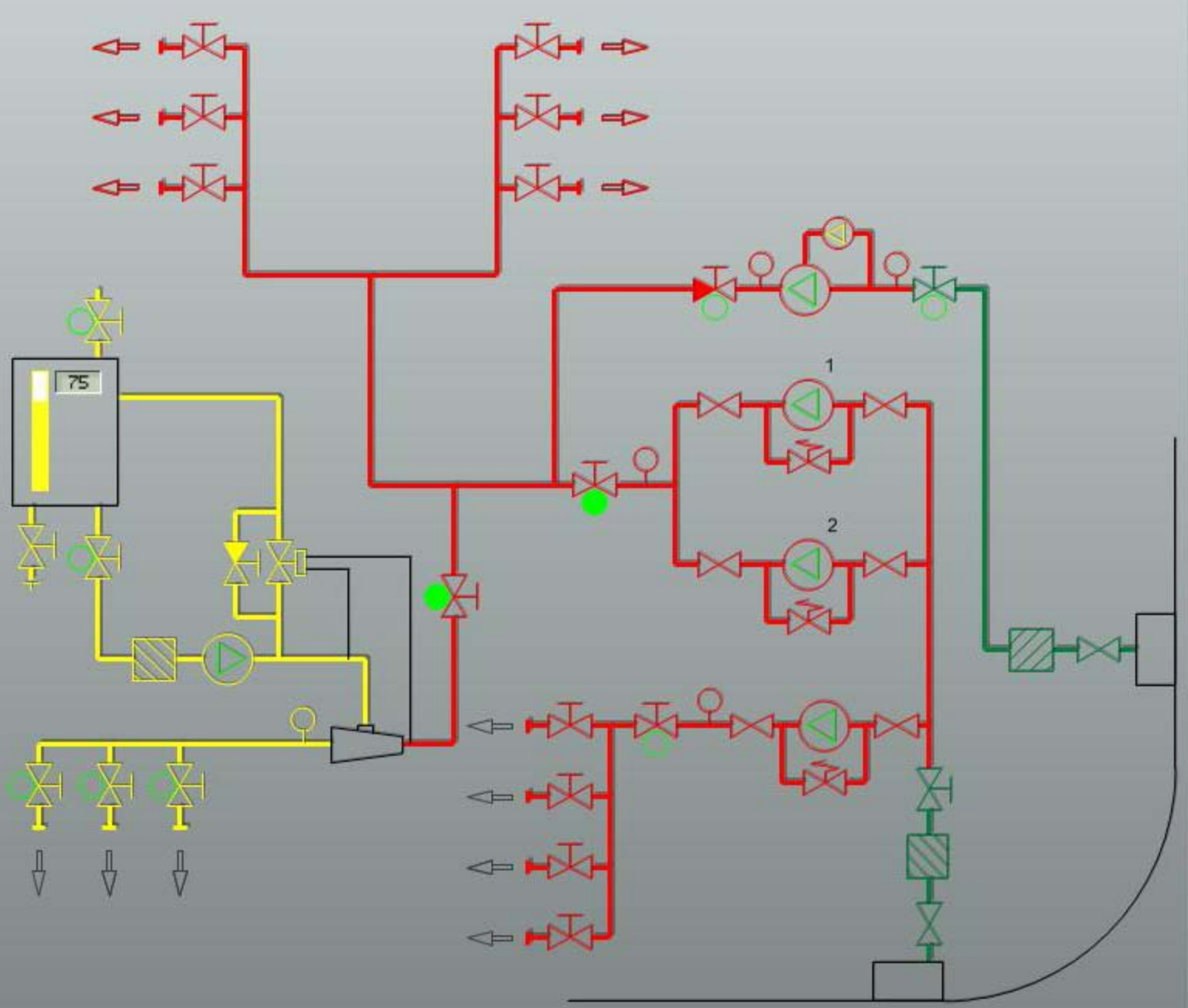
1
2
3
4
5

FIRE ALARM! EVACUATE AREA IMMEDIATELY!

DO NOT ENTER! DISCHARGED

CO_2 CONTROL PANEL

START
bar
0
20
40
60
0
MAIN VALVE
90
READY
READY
ACKN
GAS



Fire Main & Foam System

FIRE PUMPS

DISCHARGE

bar 0 2 4 6 8 10 0.0

POWER — PUMP 1

POWER — PUMP 2

VALVES

FOAM LINE

ISOL. VALVE

EMERGENCY FIRE PUMP

SUCTION

bar -1.0 0.0 0.0

DISCHARGE

bar 0 2 4 6 8 10 0.0

PUMP

PRIMING

SUCTION

DISCH.

WATER SPRAY PUMP

DISCHARGE

bar 0 2 4 6 8 10 0.0

POWER

PUMP

WATER MIST

FOAM SYSTEM

FOAM

bar 0 2 4 6 8 10 0.0

START STOP

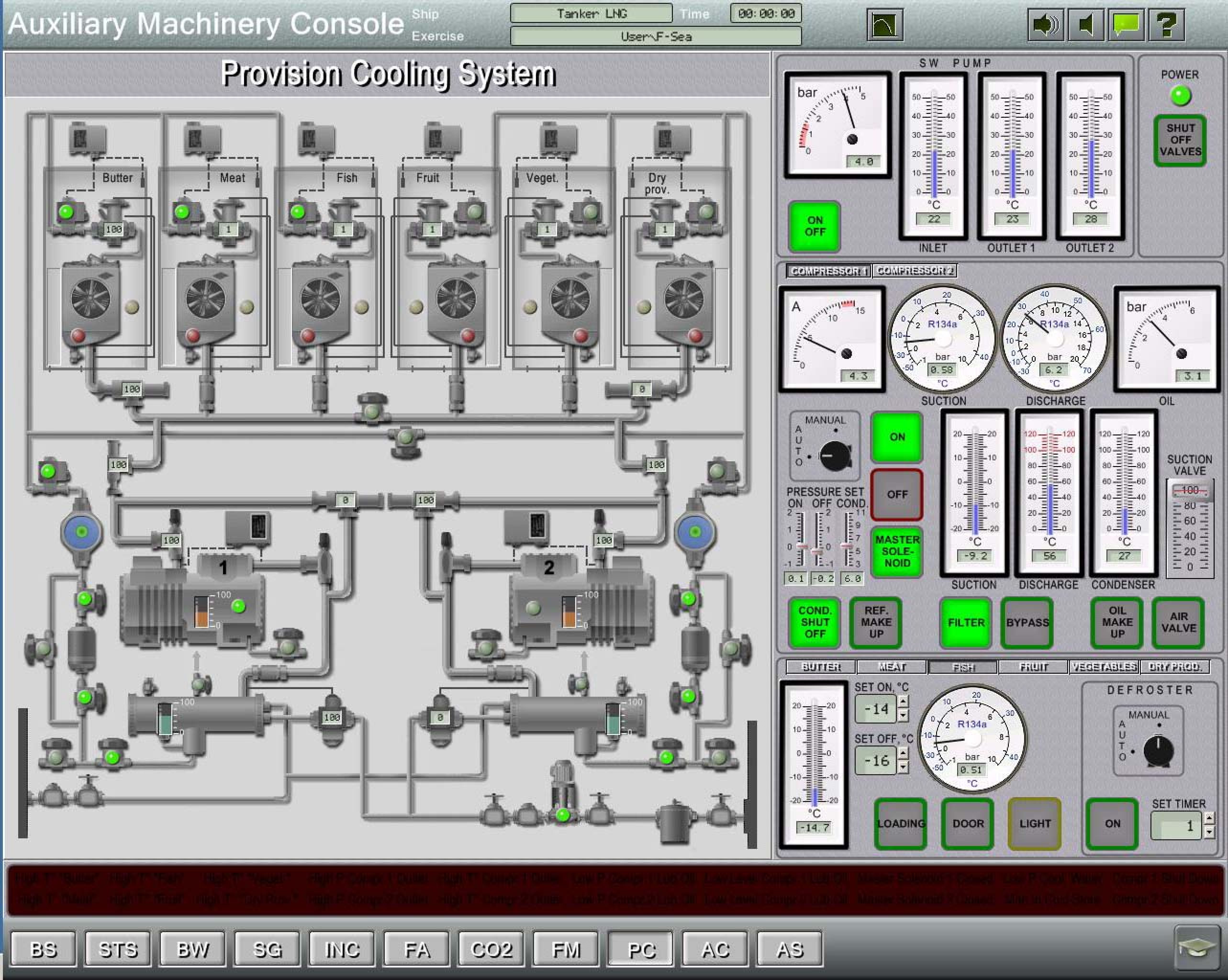
OPEN

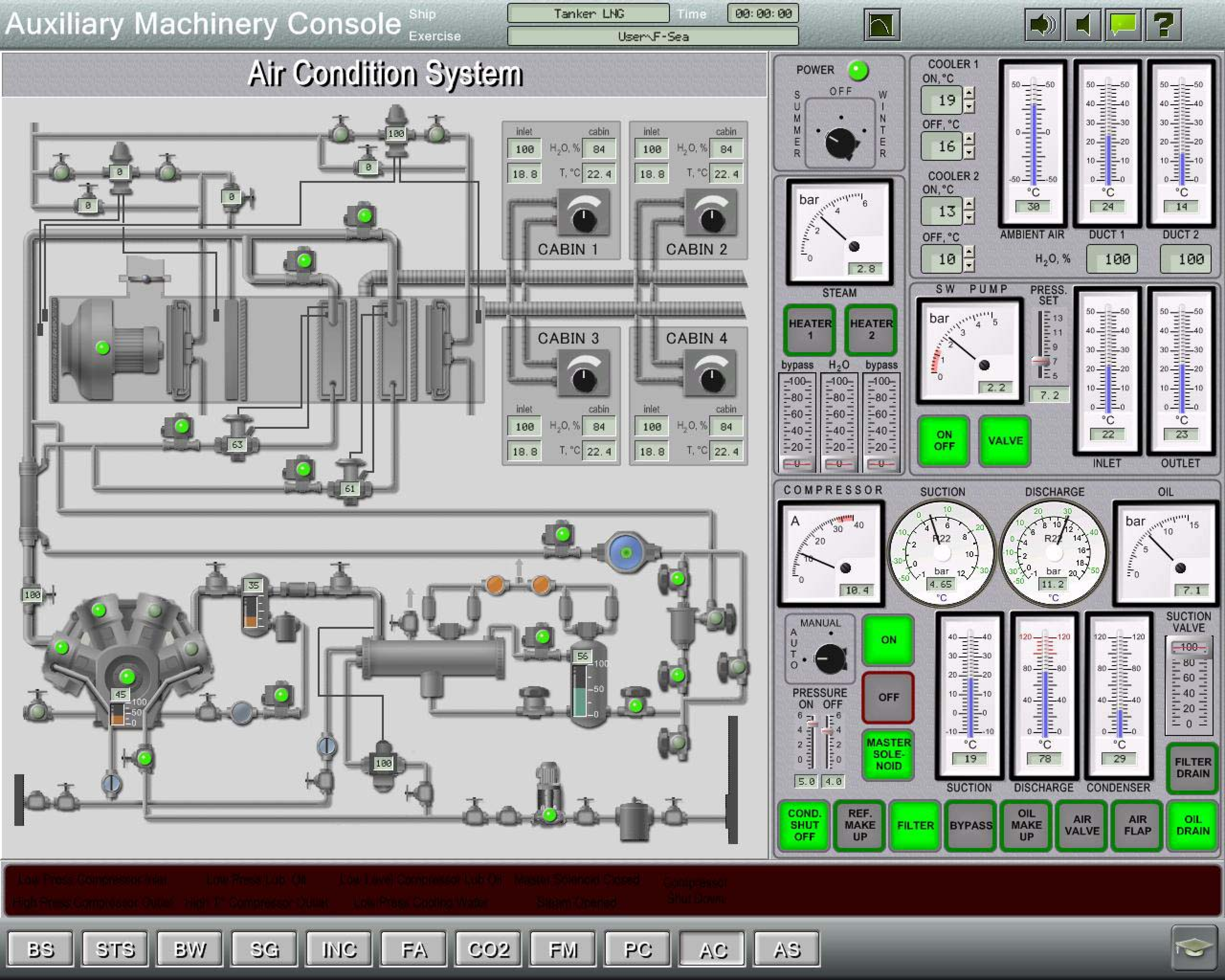
FOAM LINE

SEPARAT ROOM

CARGO PUMP ROOM

BOILER ROOM


Auxiliary Machinery Console
Ship
Tanker LNG
Time
00:00:00
Exercise
User\F-Sea
Provision Cooling System
Butter
Meat
Fish
Fruit
Veget.
Dry prov.
SW PUMP
bar
INLET
OUTLET 1
OUTLET 2
POWER
SHUT OFF VALVES
ON OFF
COMPRESSOR 1
COMPRESSOR 2
R134a
SUCTION
DISCHARGE
OIL
MANUAL
AUTO
ON
OFF
MASTER SOLE-NOID
PRESSURE SET
ON OFF COND.
CONDENSER
SUCTION VALVE
COND. SHUT OFF
REF. MAKE UP
FILTER
BYPASS
OIL MAKE UP
AIR VALVE
BUTTER
MEAT
FISH
FRUIT
VEGETABLES
DRY PROD.
SET ON, °C
SET OFF, °C
DEFROSTER
SET TIMER
LOADING
DOOR
LIGHT
BS
STS
BW
SG
INC
FA
CO2
FM
PC
AC
AS


Auxiliary Machinery Console
Ship
Exercise
Tanker LNG
Time
00:00:00
User\F-Sea
Air Condition System
inlet
cabin
H2O, %
T, °C
CABIN 1
CABIN 2
CABIN 3
CABIN 4
POWER
OFF
SUMMER
WINTER
STEAM
HEATER 1
HEATER 2
bypass
H2O
bypass
COOLER 1
ON, °C
OFF, °C
COOLER 2
AMBIENT AIR
DUCT 1
DUCT 2
SW PUMP
PRESS. SET
ON OFF
VALVE
INLET
OUTLET
COMPRESSOR
SUCTION
DISCHARGE
OIL
MANUAL
AUTO
ON
OFF
PRESSURE
MASTER SOLE-NOID
SUCTION VALVE
CONDENSER
FILTER DRAIN
COND. SHUT OFF
REF. MAKE UP
FILTER
BYPASS
OIL MAKE UP
AIR VALVE
AIR FLAP
OIL DRAIN
Low Press Compressor Inlet
Low Press Lub. Oil
Low Level Compressor Lub Oil
Master Solenoid Closed
Compressor Shut Down
High Press Compressor Outlet
High T Compressor Outlet
Low Press Cooling Water
Steam Opened
BS
STS
BW
SG
INC
FA
CO2
FM
PC
AC
AS

Alarm Station

STEERING GEAR

- Power 1 Failure
- Power 2 Failure
- Control Power Failure
- Remote Control Failure
- Oil Tank 1 Level low
- Oil Tank 1 Level Low Low
- Pump 1 Trip
- El.motor 1 Overload
- El.motor 2 Overload
- Oil Tank 1 Overflow
- Oil Tank 2 Overflow
- Oil Tank 2 Level low
- Oil Tank 2 Level Low Low
- Pump 2 Trip

BILGE WATER SYSTEM

- Bilge Well AFT Level High
- Bilge Well FWD PS Level High
- Sunken Level High
- Bilge Oil Tank Level High
- Bilge Well MID Level High
- Bilge Well FWD SB Level High
- Hold Tank Level High
- High Oil Content

BALLAST SYSTEM

- Ballast TK 1 PS Level High
- Ballast TK 2 PS Level High
- Ballast TK 3 PS Level High
- Ballast TK 4 PS Level High
- Ballast TK 5 PS Level High
- Ballast TK 6 PS Level High
- Ballast AFT PS TK Level High
- Ballast TK 1 SB Level High
- Ballast TK 2 SB Level High
- Ballast TK 3 SB Level High
- Ballast TK 4 SB Level High
- Ballast TK 5 SB Level High
- Ballast TK 6 SB Level High
- Ballast AFT SB TK Level High
- Ballast FWD TK Level High

SEWAGE TREATMENT SYSTEM

- Hold Tank Level High
- Chlorin. Tank Level High

INCINERATOR

- Incinerator Failure

FIRE ALARM SYSTEM

- Fire Alarm
- Fault Alarm
- General Alarm

CO2 System

- GO AWAY From ER CO2 release
- CO2 in Manifolds
- CO2 discharge

PROVISION COOLING SYSTEM

- "Butter" T High
- "Meat" T High
- "Fish" T High
- "Fruits" T High
- "Vegetables" T High
- "Dry provision" T High
- Compr. 1 Pressure Out High
- Compr. 1 Temp. Out High
- Compr. 1 Oil pressure Low
- Compr. 1 Oil Level Low
- Master Solenoid 1 Closed
- Compr. 1 Shut Down
- Compr. 2 Pressure Out High
- Compr. 2 Temp. Out High
- Compr. 2 Oil pressure Low
- Compr. 1 Oil Level Low
- Master Solenoid 2 Closed
- Compr. 2 Shut Down
- Cool Water Pressure Low
- MAN in Cool Room

AIR CONDITION SYSTEM

- Compr. Pressure Inlet Low
- Compr. Temp Outlet High
- Compr. Oil Level Low
- Master Solenoid Closed
- Compr. Shut Down
- Compr. Pressure Outlet High
- Lub. Oil Pressure Low
- Cool Water Pressure Low
- Steam Open

ACKN