

00:00:00
Freeze

Picture
DIR 00

Picture Directory

Alarms
Silence



no:	Picture Name:
01	Sea Water System
02	Fuel Oil System
03	Fuel Oil Service Tanks
04	Fuel Oil Settling Tanks
05	Fuel Oil Transfer System
06	HFO Separator 1
07	HFO Separator 2
08	DO Purifier System
09	LO Purifier System
10	Fresh Water System
12	ME Lubrication Oil System
13	ME Turbocharger System
19	ME Control System
20	ME Local Control
21	ME Cylinder no. 1
22	ME Cylinder no. 2
23	ME Cylinder no. 3
24	ME Cylinder no. 4
25	ME Cylinder no. 5
27	ME Piston Ring Monitor
28	ME Fuel Oil High Pressure System

no:	Picture Name:
29	ME Bearing System
53	Propeller Servo Oil System
54	Stern Tube System
56	Ship Steering & Propulsion
58	Steering Gear System
60	Start Air and Air Compressor
61	Fresh Water Generator
62	Bilge Wells
63	Bilge Separator
64	Refrigeration System
65	Waste Heat Recovery System
67	Fresh Water Sanitary System
70	Electric Power Plant
71	Diesel Generator no. 1
72	Diesel Generator no. 2
73	SG Power Take In / Power Take Off
74	Electrical Consumers
75	Synchroscope Panel
80	Steam Generation Plant
81	Exhaust Boiler
82	Steam Generator

no:	Picture Name:
83	Oil Fired Boiler
84	Boiler Combustion
85	Steam Condenser
86	Turbo Generator
87	Cargo Turbines
89	Inert Gas Plant
101	Power Chief - Generator Control
102	Power Chief - Pump/Compr. Control
103	Auto Chief - Indicator Panel
104	Auto Chief - Main Engine Control
110	Main Engine - Bridge Control
111	Ship - Course Control
112	Ship Load
115	Remote Emergency Operating Panel
120	Cylinder Indication - Press/Angle
121	Cylinder Indication - Press/Vol
122	Weak Spring Diagram
123	Cyl Indication Delta-Press/Angle
130	Pen Recorder
150	Description of Legends

Unit Conversion | Message Log | [] | [] | [] | [] | [] | [] | Back | Forward

MOUSE	SYMBOL	OUTPUT	INPUT	SYMBOL	OUTPUT	INPUT
		Current value of a tag	CURSOR HIT: - show descr. text SELECT: - change value		Unspecified valve Check valve Control valve Spring loaded valve 3 way control valve	CURSOR HIT: - show descr. text
<p>COLOURS</p> <ul style="list-style-type: none"> Diesel Oil Sea Water Steam Low Temp Fresh Water Lubricate Oil Fuel Oil Heavy Fuel Oil High Temp Fresh Water Gas Passive colour 		Digital output value with alarm PREFIX Characters: C - constant D - density E - power/isolation F - frequency G - flow H - heat transfer I - current L - level M - mass N - speed P - pressure Q - force R - pump (fan) state T - temperature V - valve state/voltage W - viscosity X - position (state) Z - signal/concentration	CURSOR HIT: - show descr. text SELECT: - acknowledge alarm		Manual ON/OFF valve Quick closing valve Automatic ON/OFF 3 way manual ON/OFF 3 way automatic ON/OFF	CURSOR HIT: - show descr. text ACTIVE: - Open valve PASSIVE: - Close valve
<p>STATIC SYMBOLS</p>						
	Filter					
	Heat Exchanger					
	Delta					
	Signal line					
	Process line					
	Static descr. text					
	Positive flow direction					
	Signal direction					
	Turbine driven					
	Electrically driven					
	Shaft driven					
		Digital output value without alarm PREFIX Characters: (See above)	CURSOR HIT: - show descr. text		Fan	CURSOR HIT: - show descr. text ACTIVE: - Start PASSIVE: - Stop
		If instructor level and active malf. in group: M is lighting yellow	SELECT: - show malf. page		Centrifugal pump	
		Picture number	SELECT: - Change picture		Displacement pump	
		Light emitting diode: - ON (Steady light) - OFF (No light) - Change (Blinking)			Condition Condition Condition	SELECT: - Set ON - show descr. text SELECT: - Set OFF - show descr. text SELECT: - Set ON/OFF (toggle) - show descr. text
		OUTPUT field: - READY (Coloured text) - NOT READY (Black text)		CONTROLLERS		
		INPUT/OUTPUT field: - STARTED (Coloured text) - NOT STARTED (Black text)	SELECT: - show descr. text - START		Controller Window Set Point Controller Window Set Point	SELECT on Contr. Window: - Show Contr. Window SELECT on buttons: - set AUTO/MAN - show descr. text CURSOR HIT on values: - show descr. text SELECT on values: - change value

00:00:00
Freeze

00:00:00
Scenario

Init. Cond.:

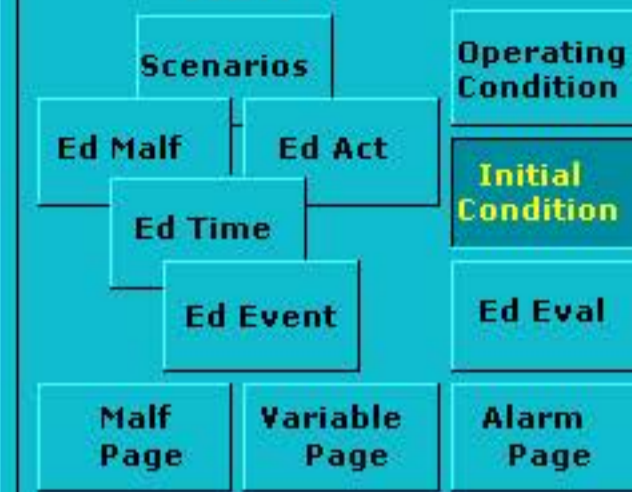
Alarms
Silence



INITIAL CONDITIONS

SNAPSHOTS

VIEW



I01	Cold Ship	I21	test	I41	
I02	At Harbour	I22	sec round	I42	
I03	Ready for Departure	I23		I43	
I04	Slow Ahead - Loaded	I24		I44	
I05	Full Ahead - Loaded	I25		I45	
I06	Full Ahead - Ballast	I26		I46	
I07	Cargo Pumping	I27		I47	
I08		I28		I48	
I09		I29		I49	
I10	shut down	I30		I50	
I11		I31		I51	
I12		I32		I52	
I13		I33		I53	
I14		I34		I54	
I15		I35		I55	
I16		I36		I56	
I17		I37		I57	
I18		I38		I58	
I19		I39		I59	
I20		I40		I60	

- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08
- 09
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

User Name:
Administrator

Simulator Host:
NC_ASP_INS1

Scenario:

Initial Condition:

Simulation
Speed Ratio < 1.00

Snapshot
Interval ... < 00:01:00

Snapshot
Cycles < 100

HmiAccess File Name:
HAConfig.cnf

Create Rename Delete

Unit Conversion

Message Log

Back

Forward

00:00:00 Freeze
00:00:00 Scenario

Operating Conditions

Alarms
Silence



ACCESS

Instructor
Operator

SOUND CONTROL

Sound System

Volume: 0 %

FIXED PROCESS

Air
Steam
Level/Temp
Ship Speed

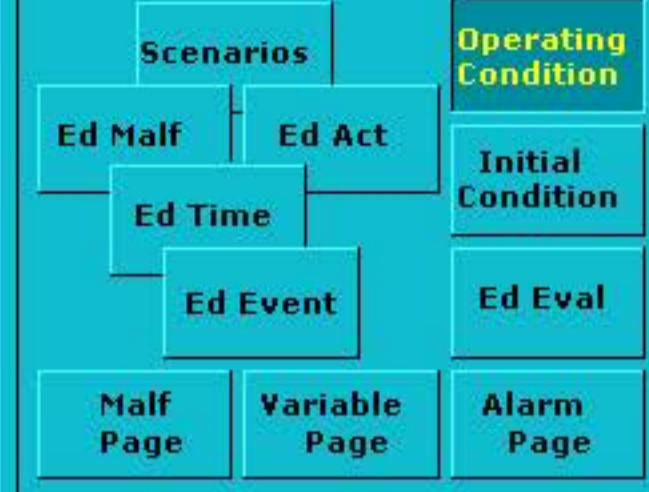
INHIBIT

Alarm Horn
AC Buzzer
ECR Bell
ME Local Bell
Keyboard Buzzer

SNAPSHOTS

- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08
- 09
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

VIEW



User Name:
Administrator

Simulator Host:
NC_ASP_INS1

Scenario:

Initial Condition:

Simulation
Speed Ratio < 1.00

Snapshot
Interval ... < 00:01:00

Snapshot
Cycles < 100

HmiAccess File Name:
HAConfig.cnf

DYNAMIC RESPONSE

Levels

Normal
Fast
Steady

Process Dynamics

Normal
Fast
Very Fast

Ship Dynamics

Normal
Fast
Very Fast

LOG Printer 1

Alarm
Event
Datachief
Malfunction
Instructor
Select

LOG Printer 2

Alarm
Event
Datachief
Malfunction
Instructor
Select

LOG Printer 3

Alarm
Event
Datachief
Malfunction
Instructor
Select

Unit Conversion

Message Log

Back

Forward



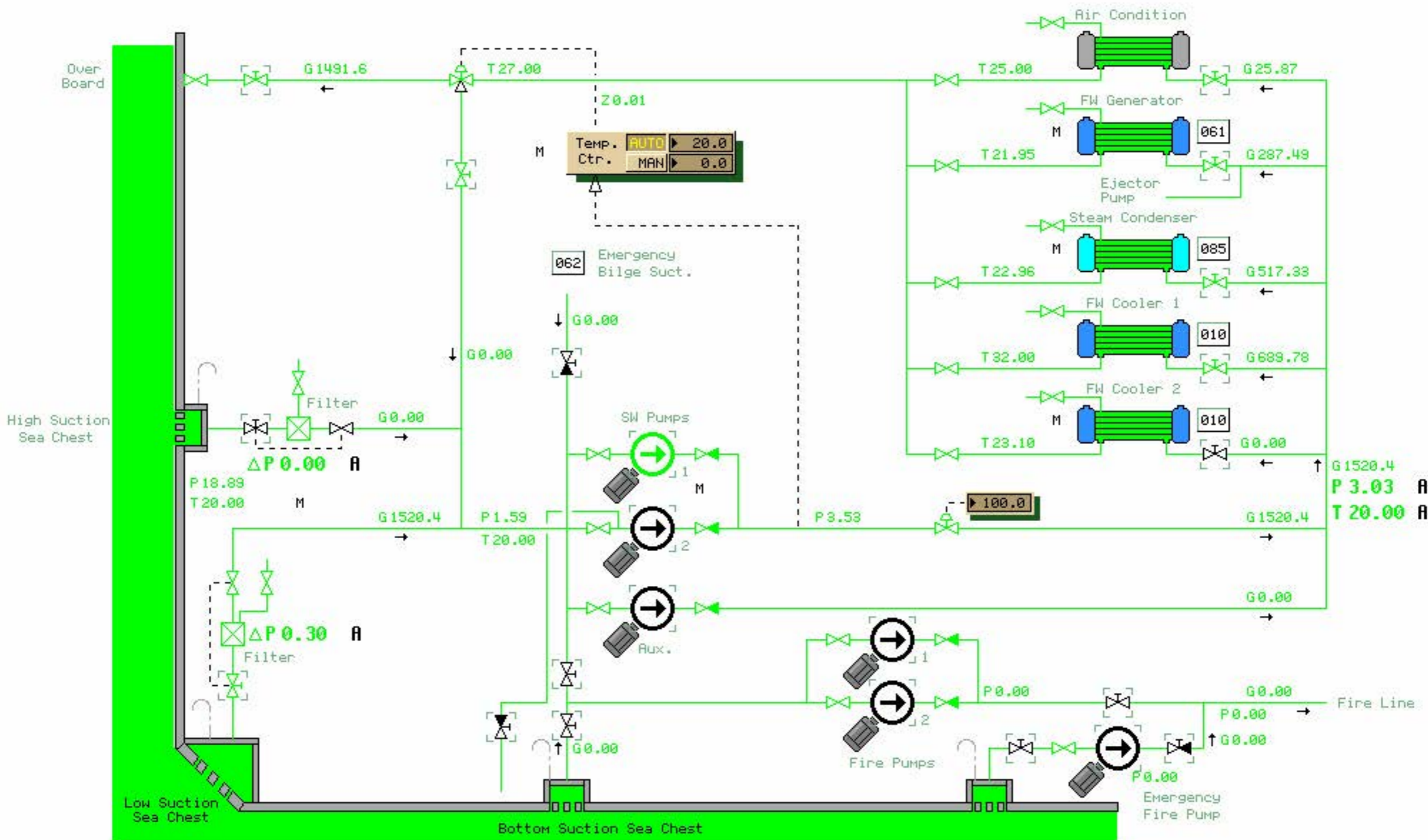
TRACKER BALL		SYMBOL	OUTPUT	INPUT	SYMBOL	OUTPUT	INPUT	
			Current value of a tag	SELECT: - show descr. text - enter new value		Unspecified valve		
COLOURS 			Digital output value with alarm PREFIX Characters: C - constant D - density E - power/isolation F - frequency G - flow H - heat transfer I - current L - level M - mass N - speed P - pressure Q - force R - pump (fan) state T - temperature U - valve state/voltage W - viscosity X - position (state) Z - signal/concentration	SELECT: - show descr. text ACTIVE: - acknowledge alarm		Check valve		
STATIC SYMBOLS 						Digital output value without alarm PREFIX Characters: (See above)	SELECT: - show descr. text	
			If instructor level and active malf. in group: M is lighting yellow	ACTIVE/SELECT/PASSIVE: - show malf. page				
			Picture number	SELECT: - Change picture		3 way choke valve		
			Light emitting diode: - ON (Steady light) - OFF (No light) - Change (Blinking)			ON/OFF valve	SELECT: - show descr. text ACTIVE: - Open valve PASSIVE: - Close valve	
			OUTPUT field: - RUNNING (Coloured text) - NOT RUNNING (Black text)			Solenoid valve		
			INPUT/OUTPUT field: - STARTED (Coloured text) - NOT STARTED (Black text)	SELECT: - show descr. text - START		3 way ON/OFF valve	SELECT: - show descr. text ACTIVE: - Start PASSIVE: - Stop	
						3 way solenoid valve		
						Fan	SELECT: - show descr. text ACTIVE: - Start PASSIVE: - Stop	
						Pump		
						Expansion tank. - Level is shown		
						Condition	SELECT: ON	
						Condition	SELECT: OFF	
						Condition	SELECT: ON or OFF (toggle)	
					CONTROLLERS 			SELECT, ACTIVE or PASSIVE on Contr. Window: - Show Contr. Window SELECT on other points: - show descr. text - select AUTO/MAN or - change value

00:00:00
Freeze

Picture
MD 01

Sea Water System

Alarm
Group



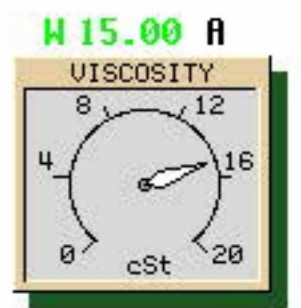
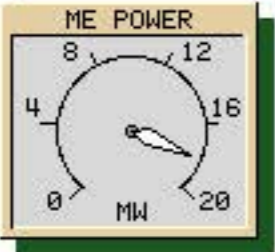
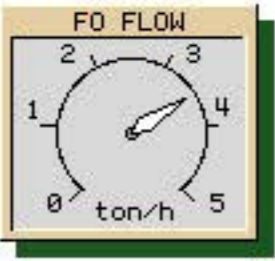
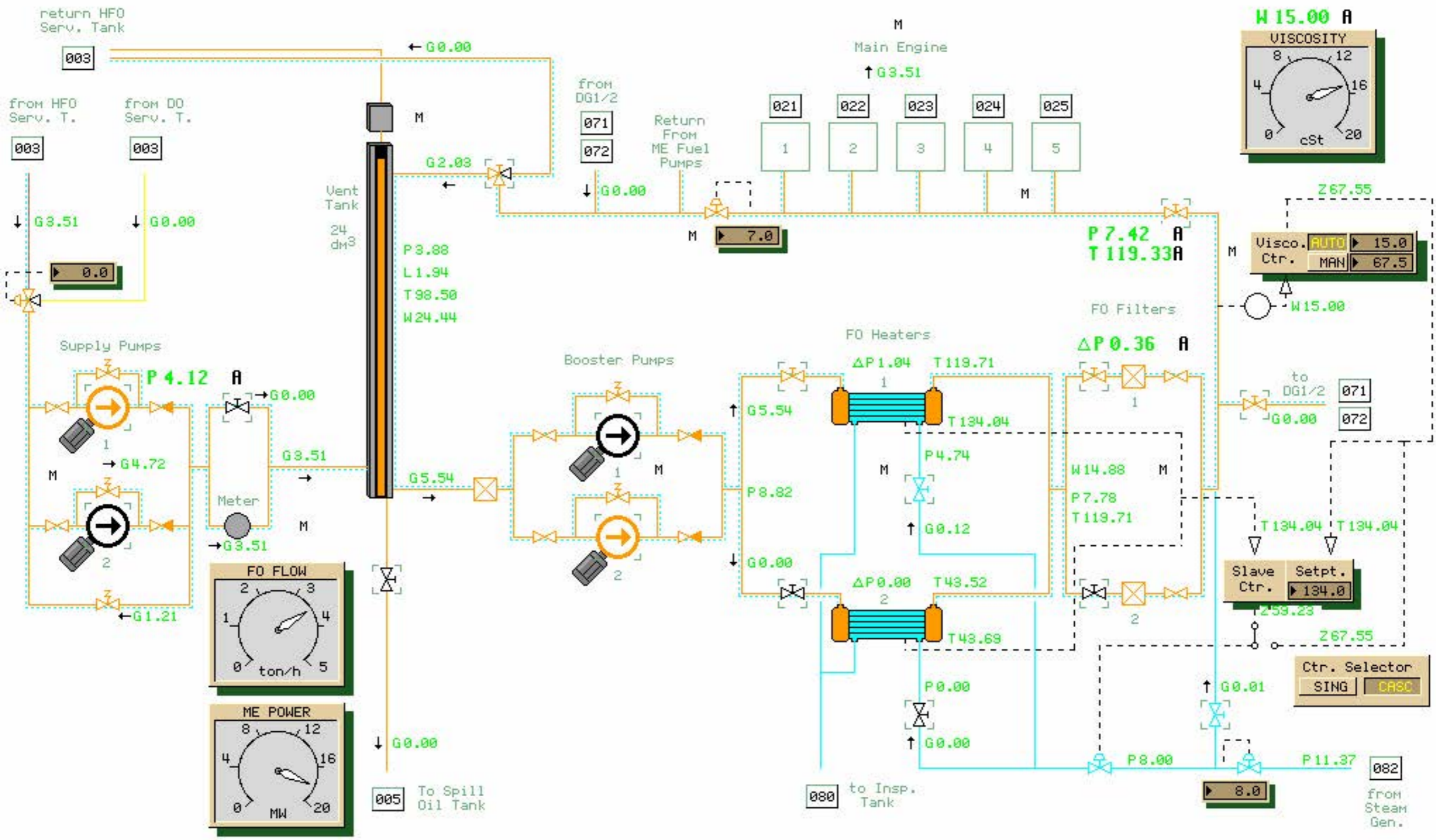
U

00:00:00
Freeze

Picture
MD 02

Fuel Oil System

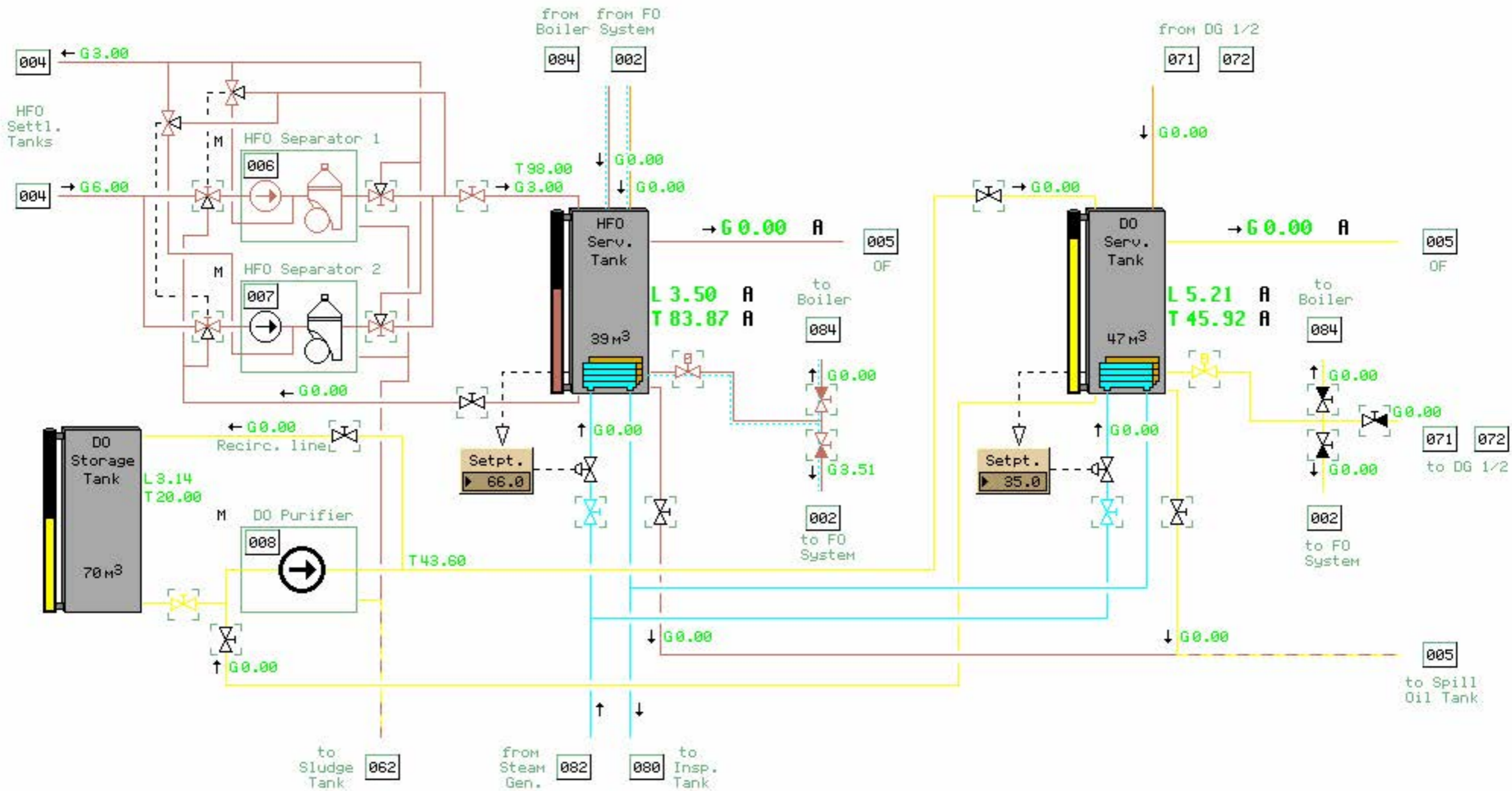
Alarm
Group

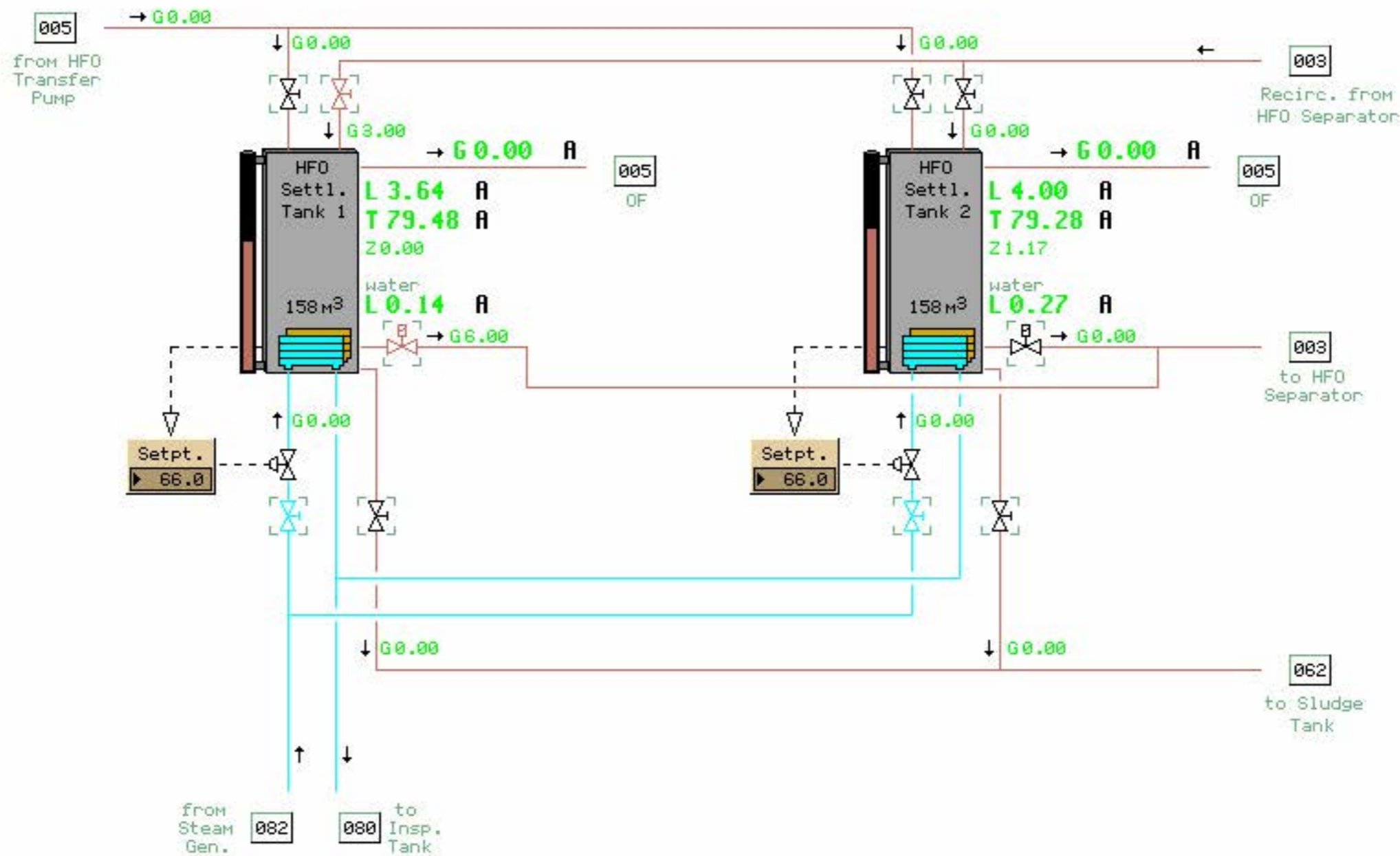


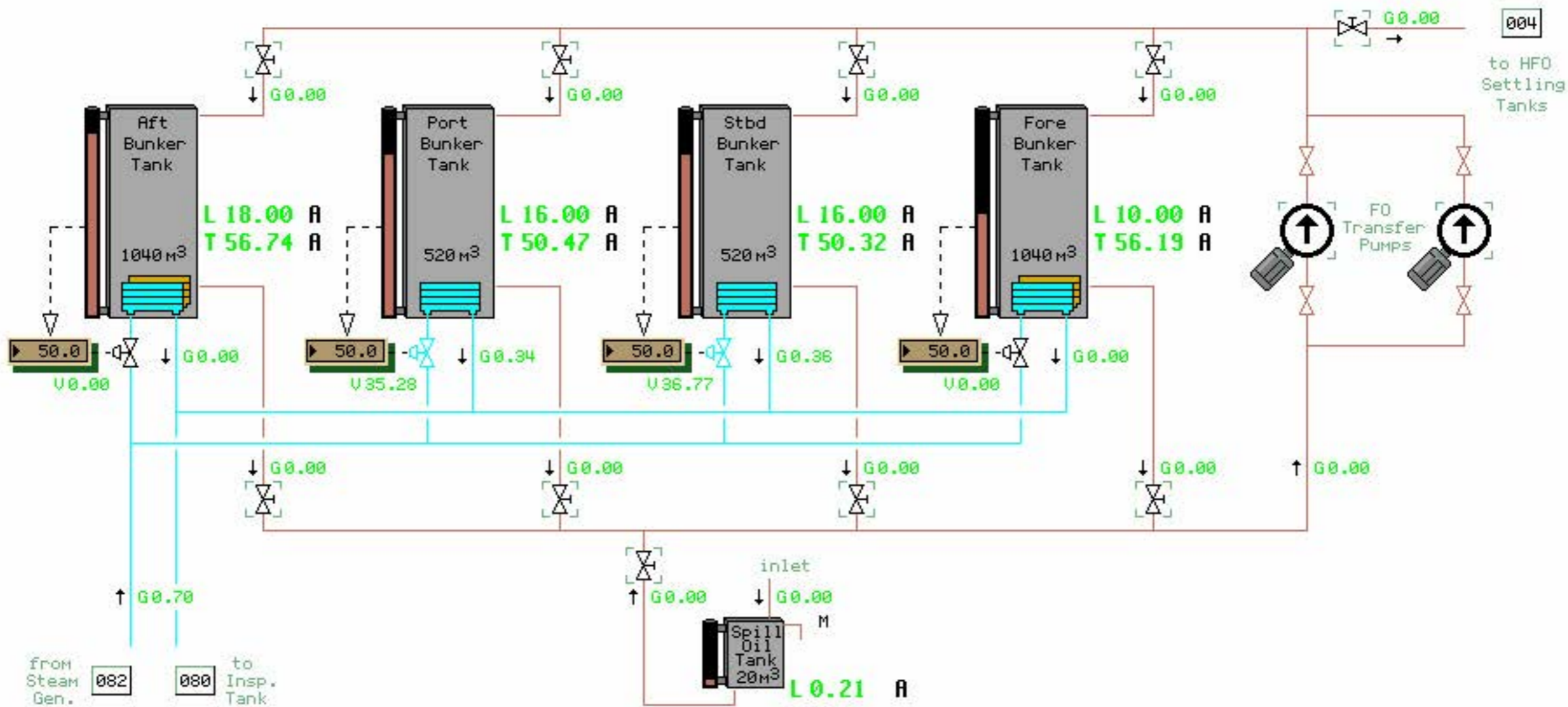
Visco. Ctr.

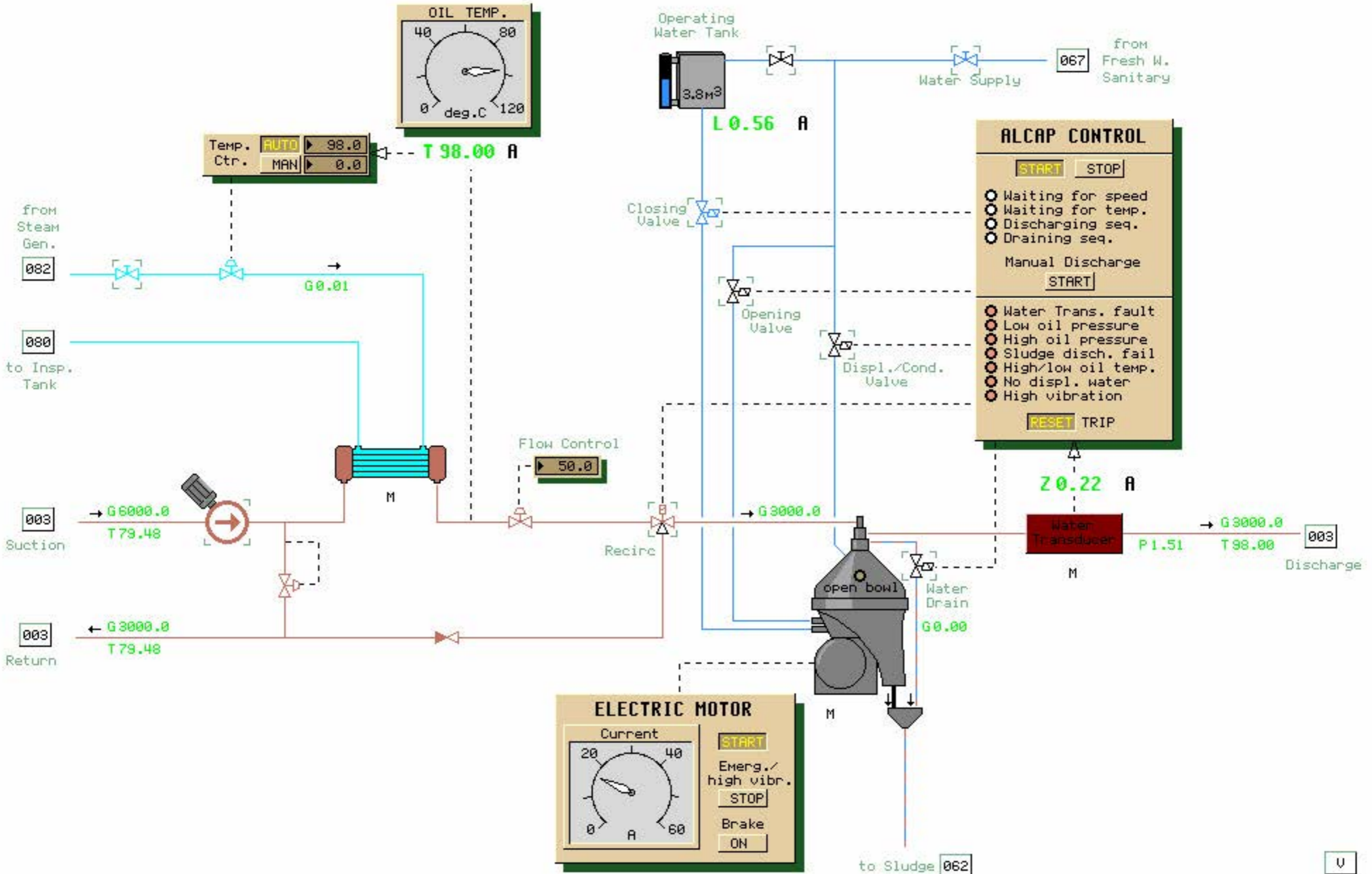
Slave Ctr. Setpt.

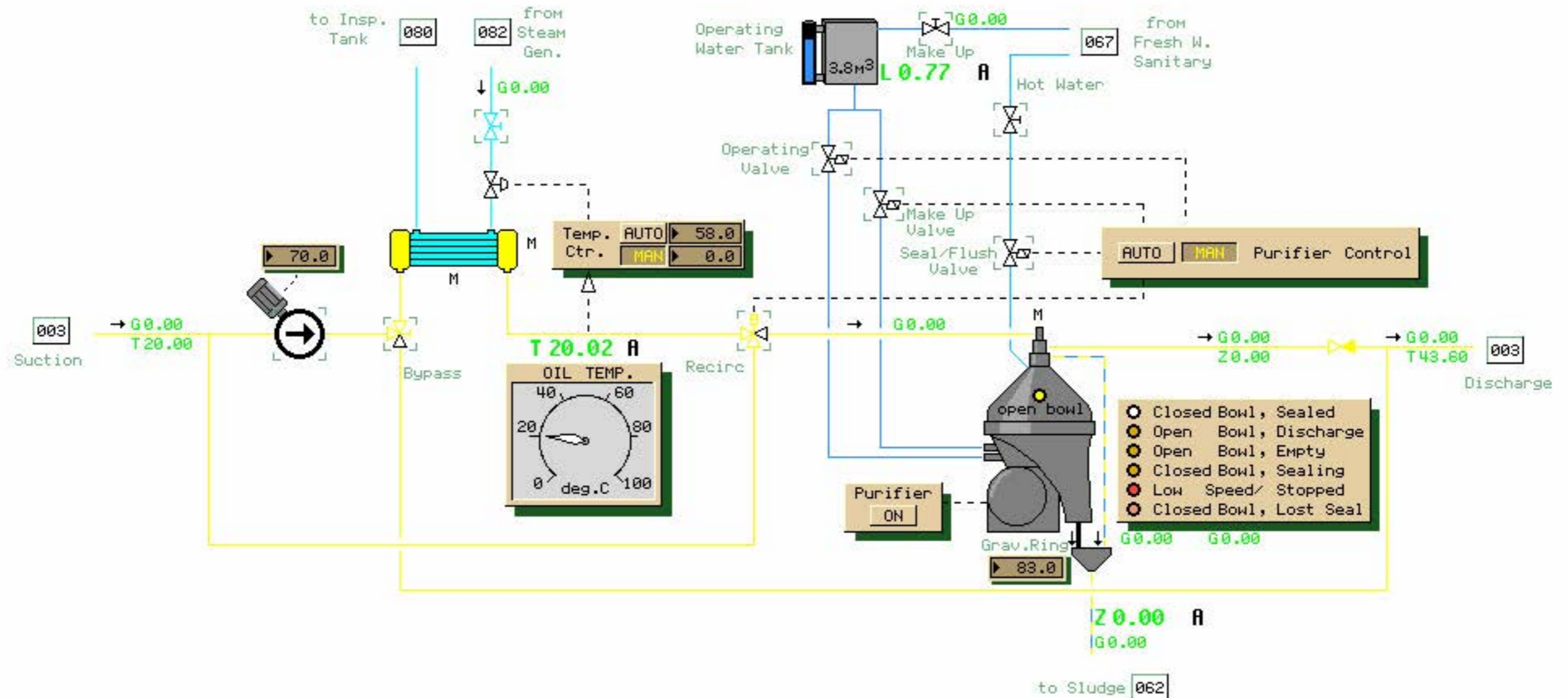
Ctr. Selector

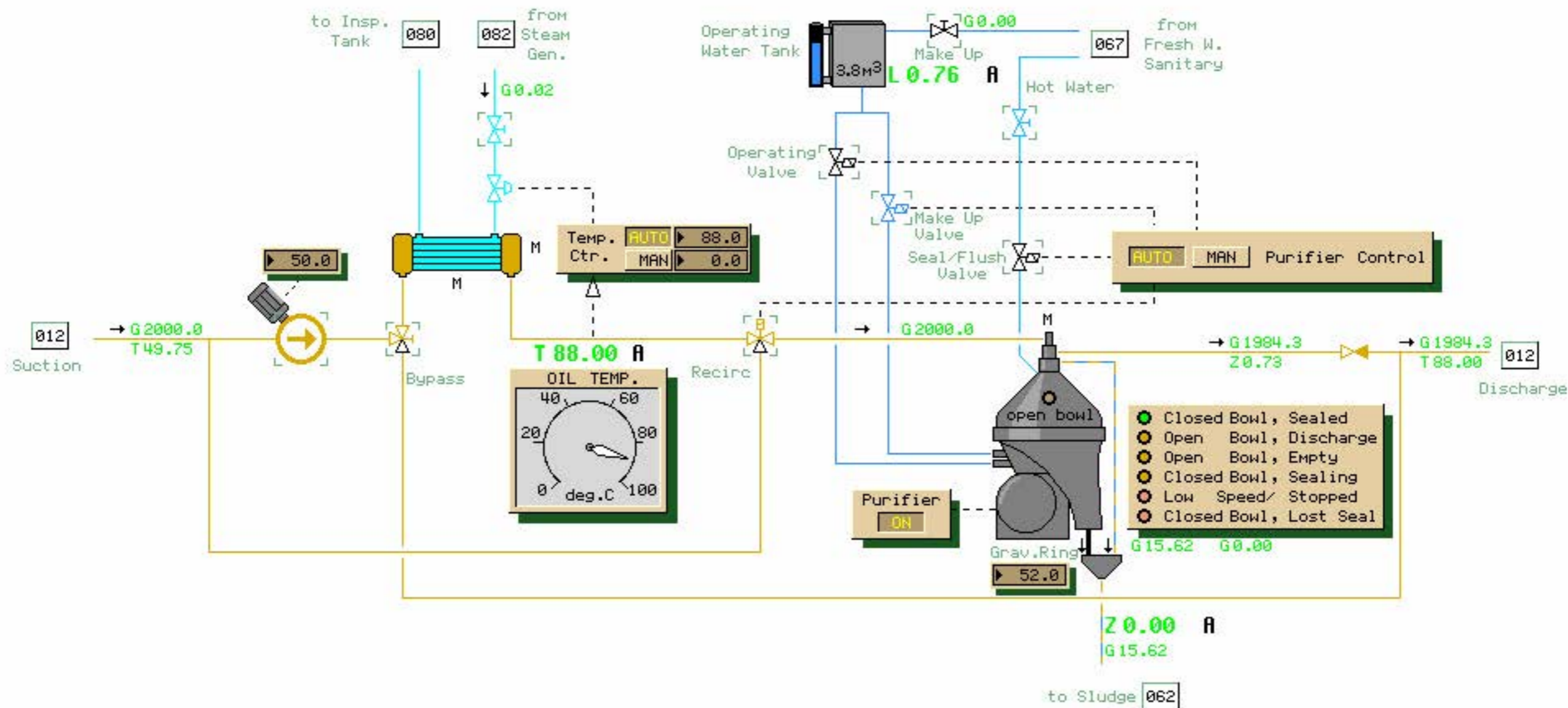


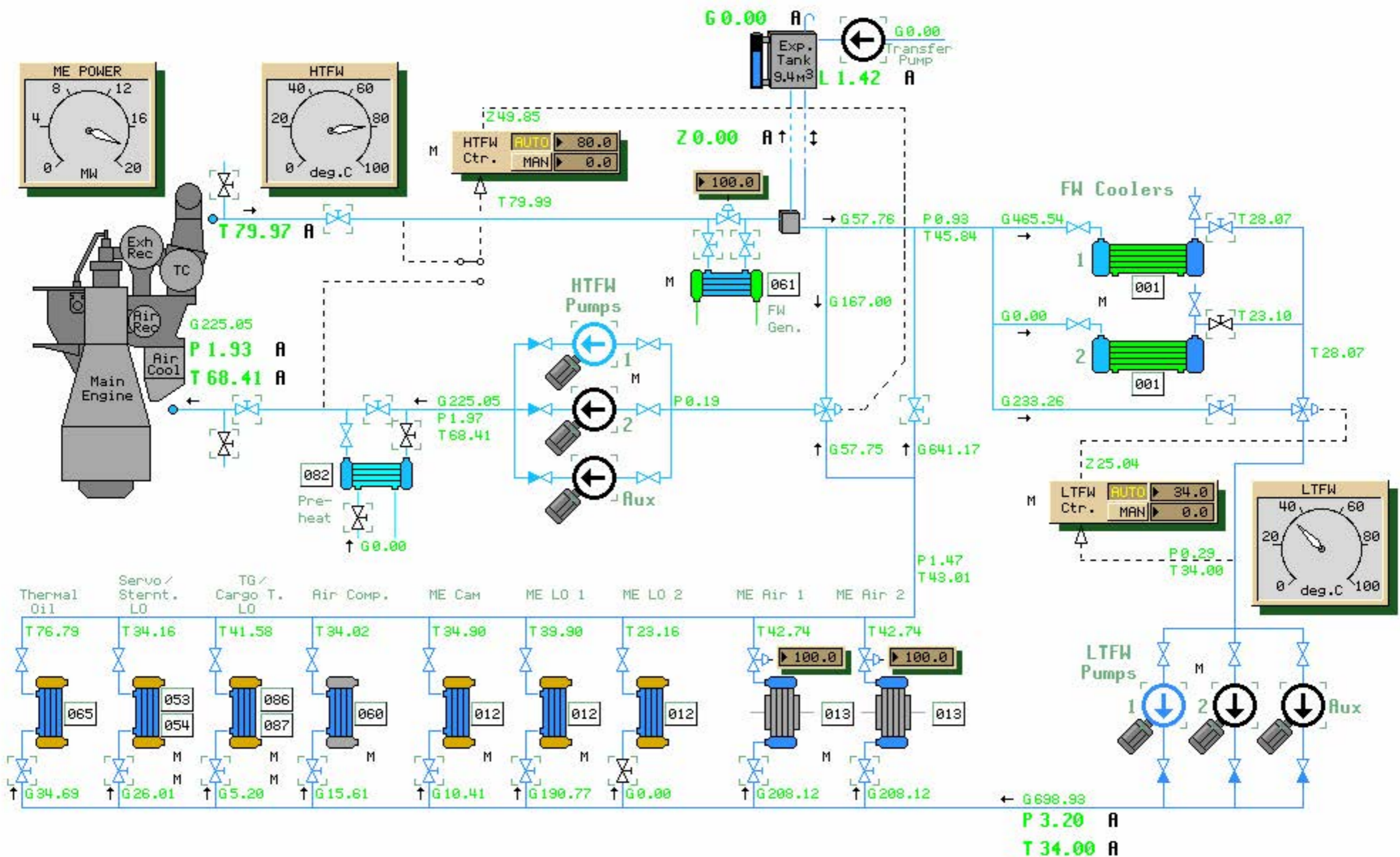


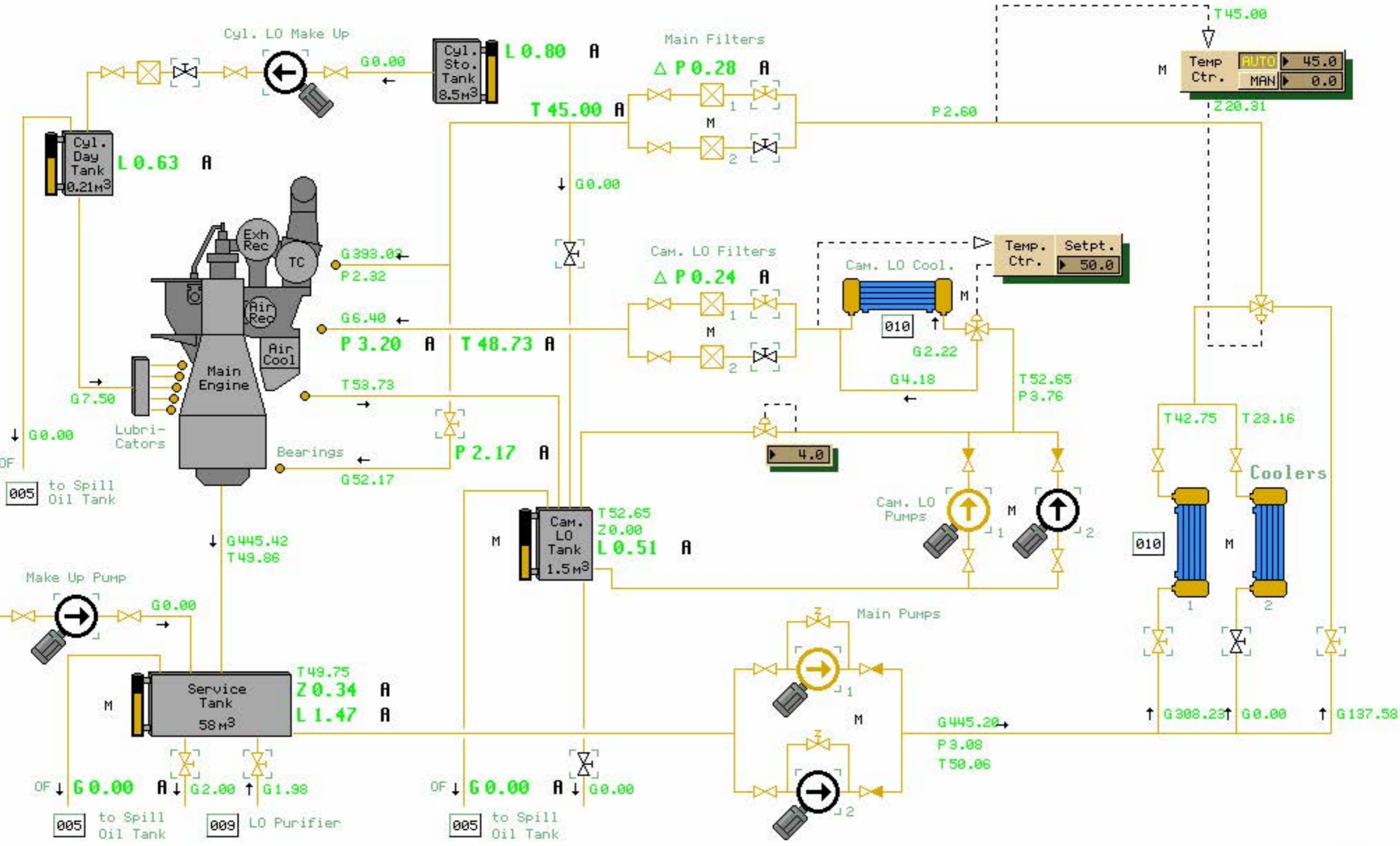






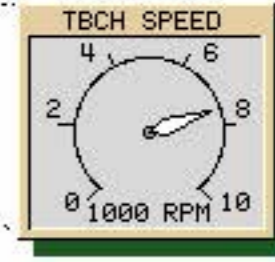
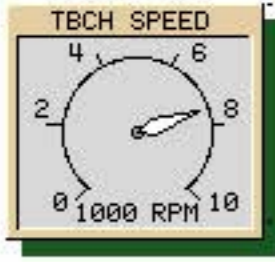
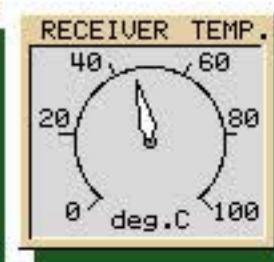
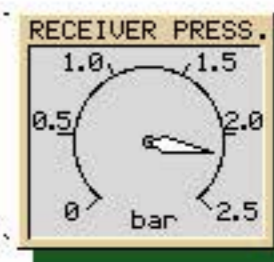
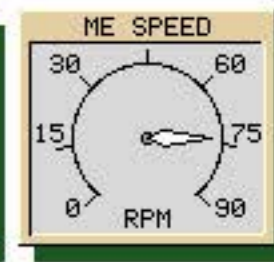
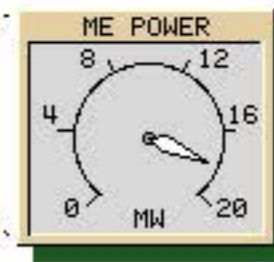
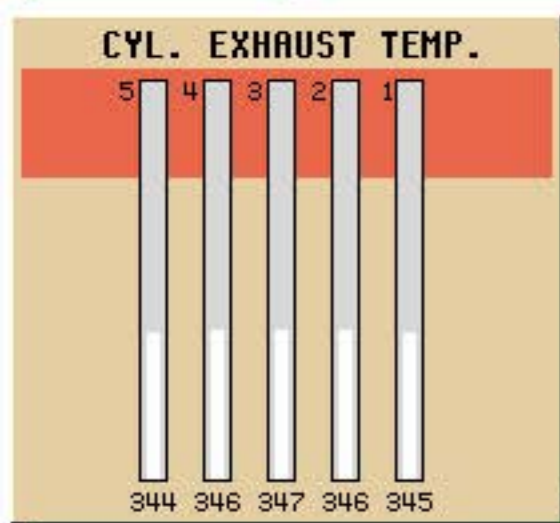
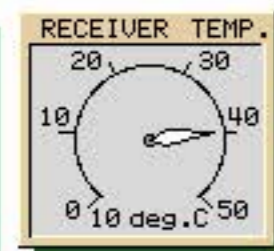
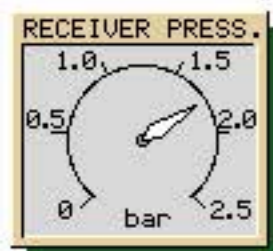
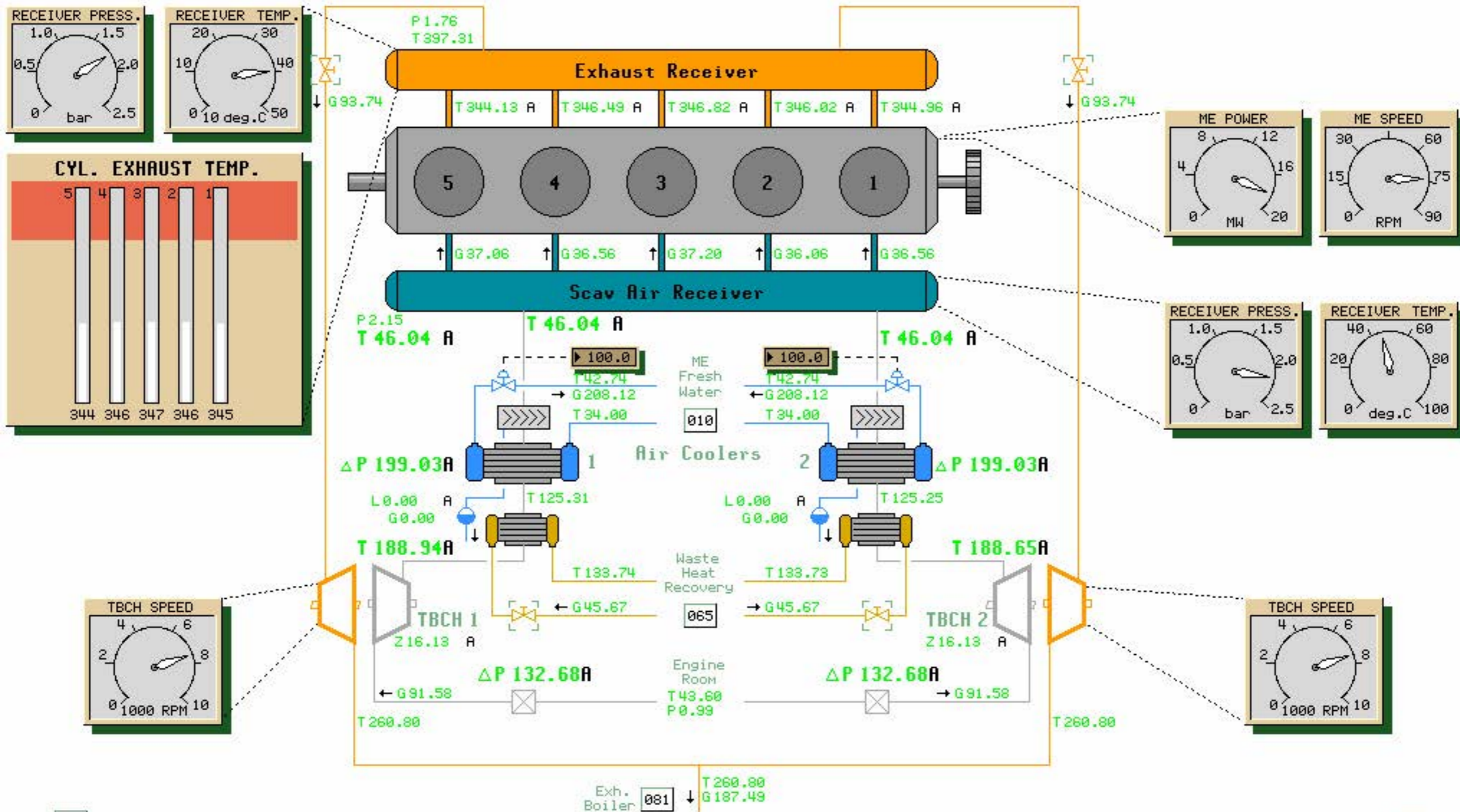


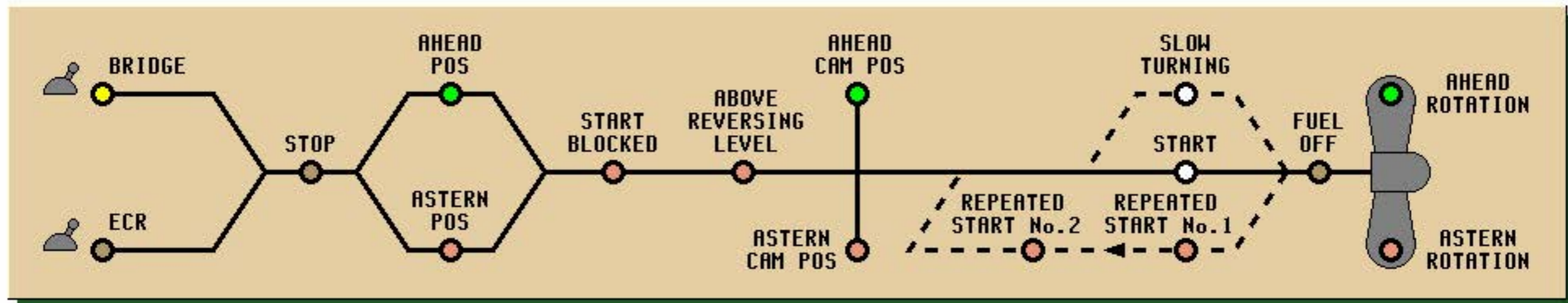






MAIN ENGINE





ME CONTROL

Ctrl. Lever Pos.

- Fixed Pitch
- Variable Pitch

ME Power

8 12 16 20
4 0 MW

Fuel Link Pos.

40 60 80 100
20 0 %

AC CONTROL STATE

- Engine Stopped
- Engine Running
- Starting
- Waiting For Ignition
- Waiting For Rev Speed
- Reversing Cam
- Braking Air On
- Start/Revers/Brake Fail

ME SHUT DOWN

- LO Pressure
- Thrust Bearing Temp
- Cyl Coolw Temp
- Overspeed
- Turning Gear In

Pitch Control

LOCAL

Local Command

Governor

REMO LOCAL

THERMAL MONITOR

- Thermal Limitation

Active Speed SP
 Thermal rpm Limit
 Thermal Heat Index

ME SLOW DOWN

- LO Pressure
- Thrust Bearing Temp
- Piston Oil Flow
- Scavenging Air Temp
- Miscellaneous

Prop. Pitch

-0.4 0.4
-1.2 P/D 1.2

Ship Speed

-6 6
-18 knots 18

ME Speed

30 30
60 90 RPM

ME FAIL

- Start Fail
- Reversing Fail
- Braking Fail
- Start Air Pressure
- Control Air Pressure

SAFETY OVERRIDE

- ME Shutdown
- ME Slowdown
- Thermal Load Program
- Control Limiters

LOAD LIMITATION

- Scav Air Limitation
- Torque Limitation

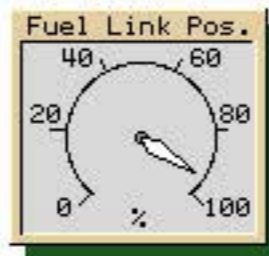
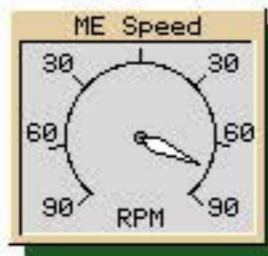
ME Speed N74.00 R



Responsibility Transfer

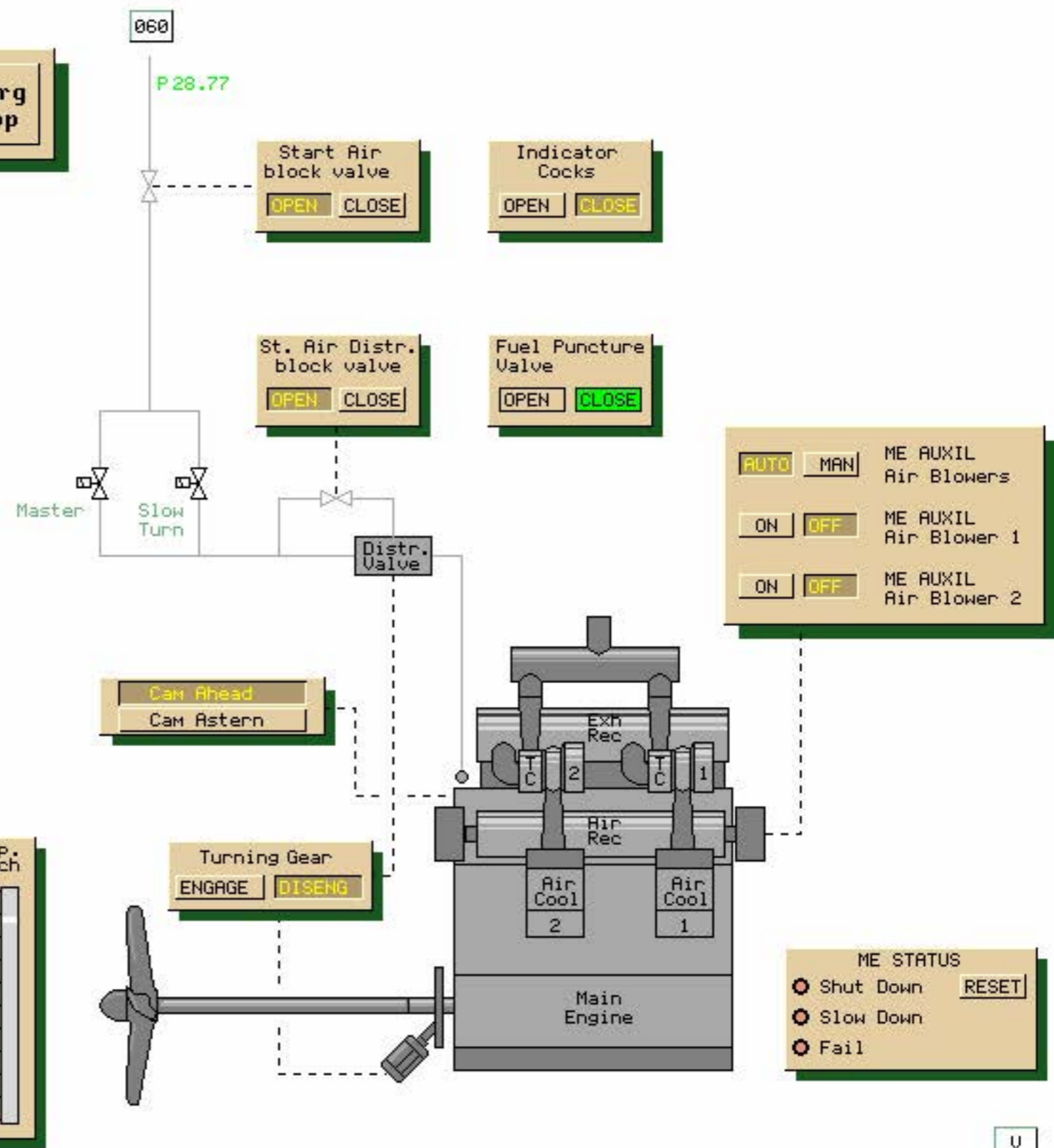
Local Engine Ctr. R **Bridge**

Finish with Engine ECR Stand By At Sea Emerg Stop



Full	A	10
Half	H	9
Slow	E	8
Dead Slow	A	7
Stop	D	6
Dead Slow	A	5
Slow	S	4
Half	T	3
Full	E	2
	R	1
	N	START
		STOP

Slow Turn Start Pos **-2.0** Stop Pos

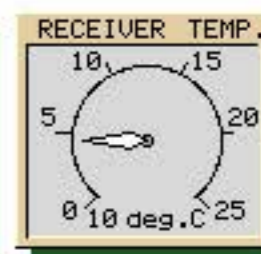
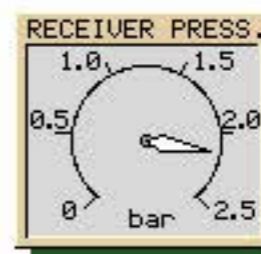
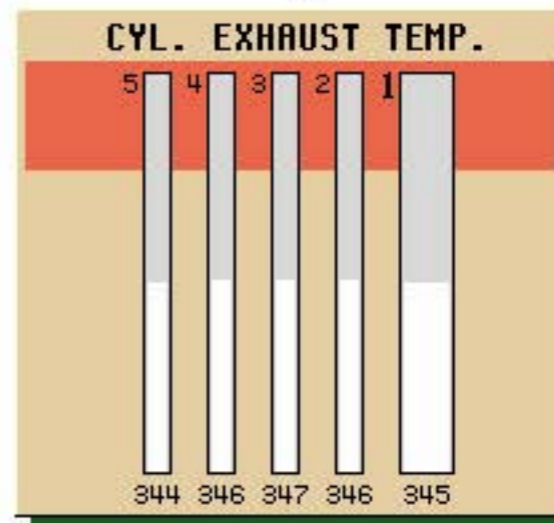
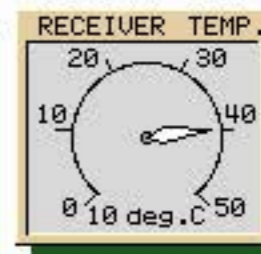
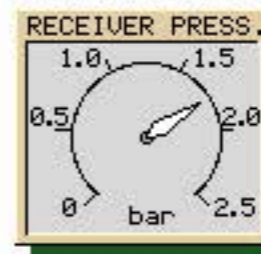
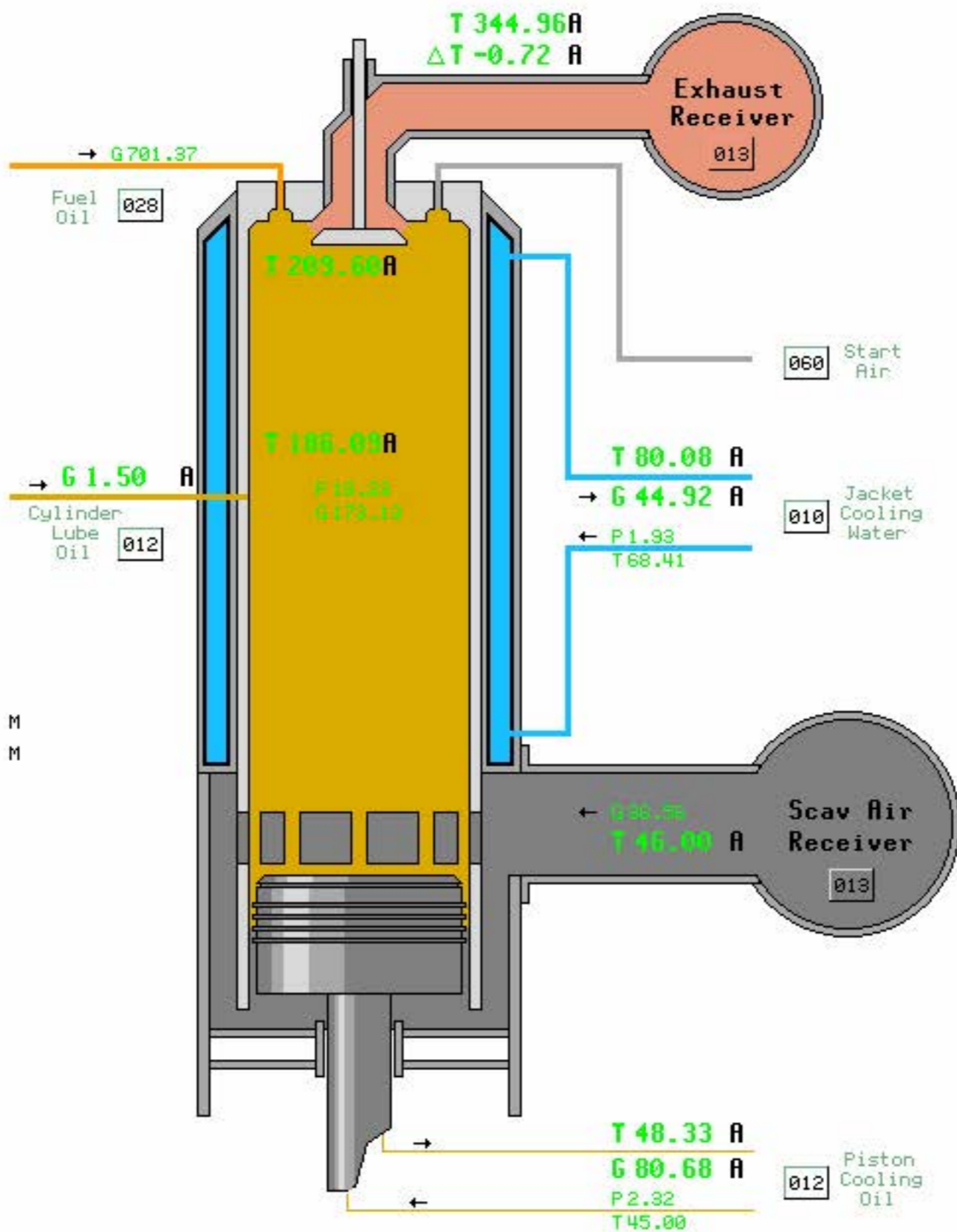
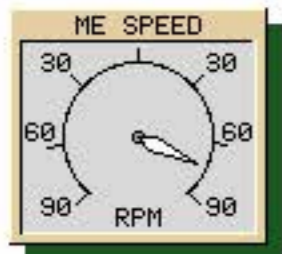
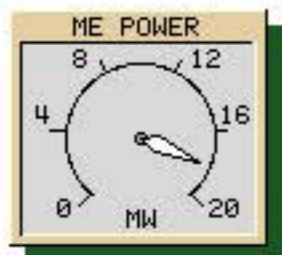


00:00:00
Freeze

Picture
MD 21

ME Cylinder no. 1

Alarm
Group



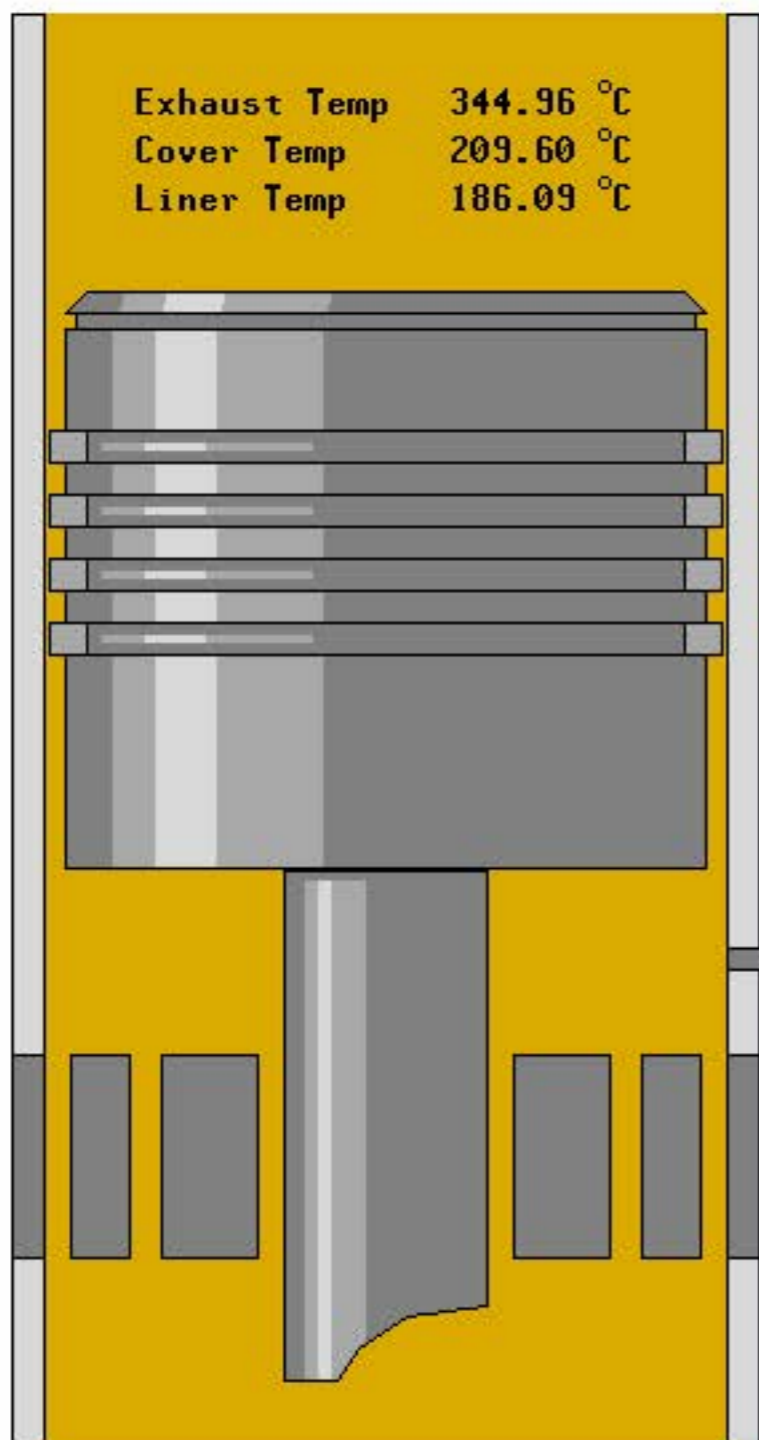
M
M

U

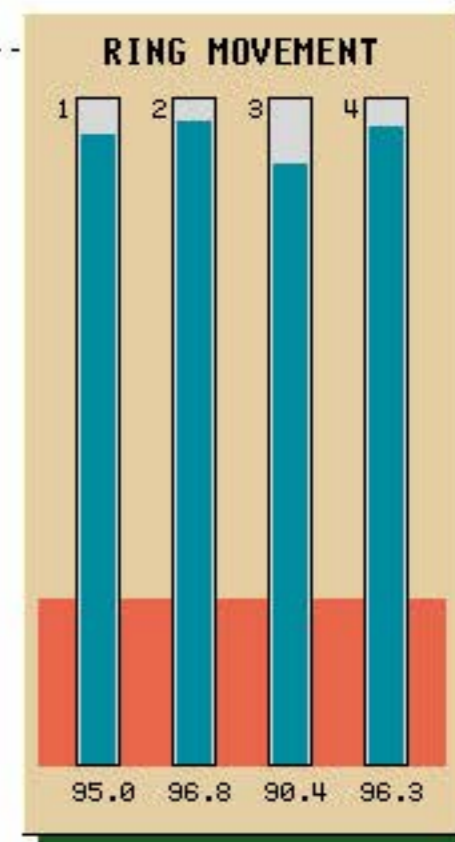
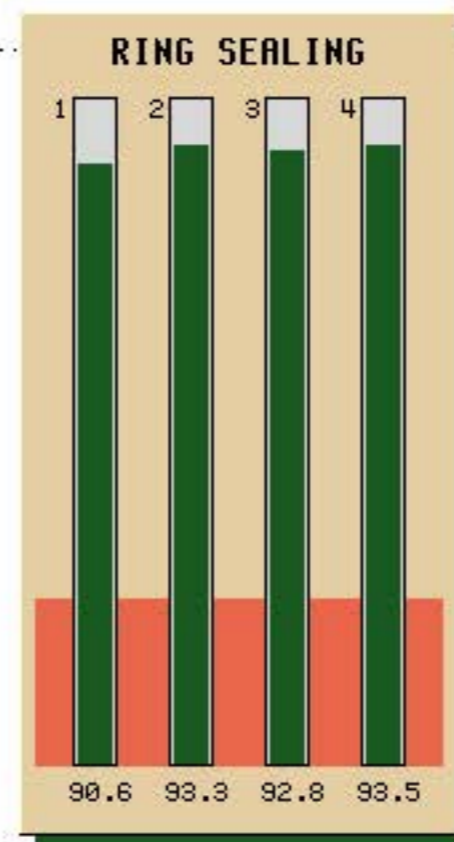


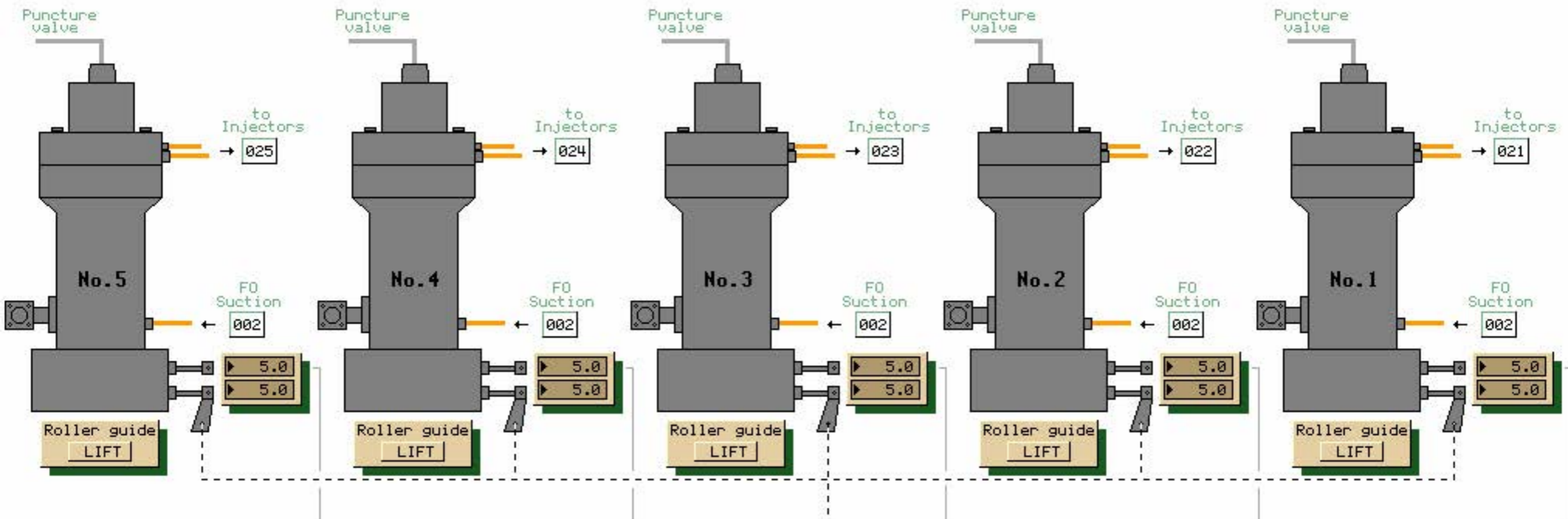
Cylinder Selection

- 1
- 2
- 3
- 4
- 5



Proximity Sensor



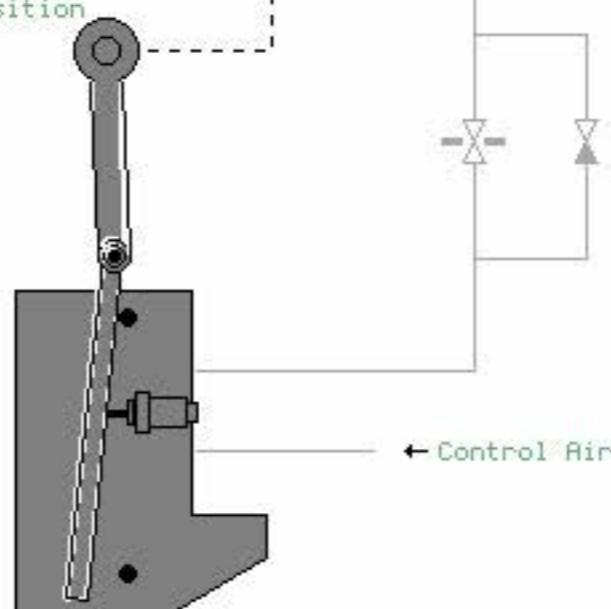


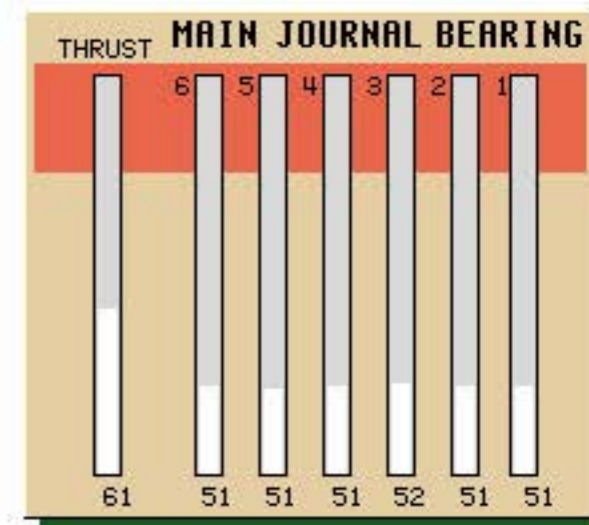
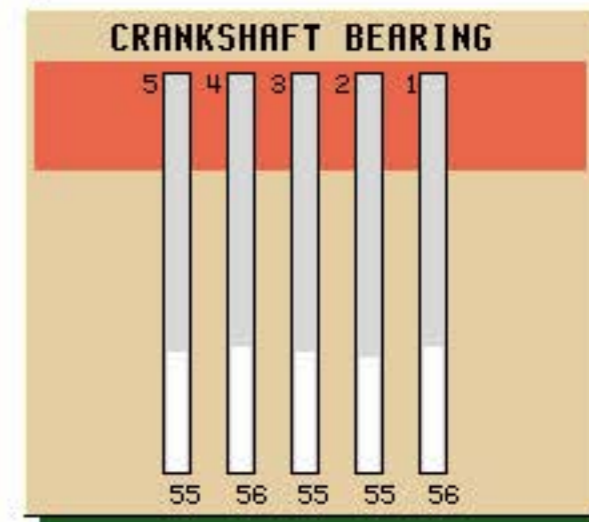
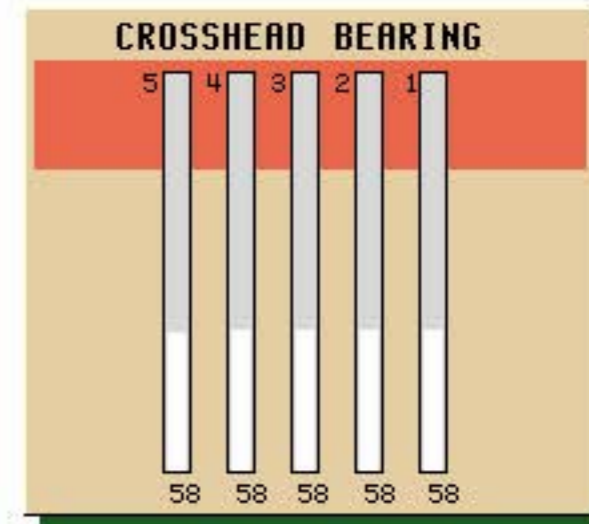
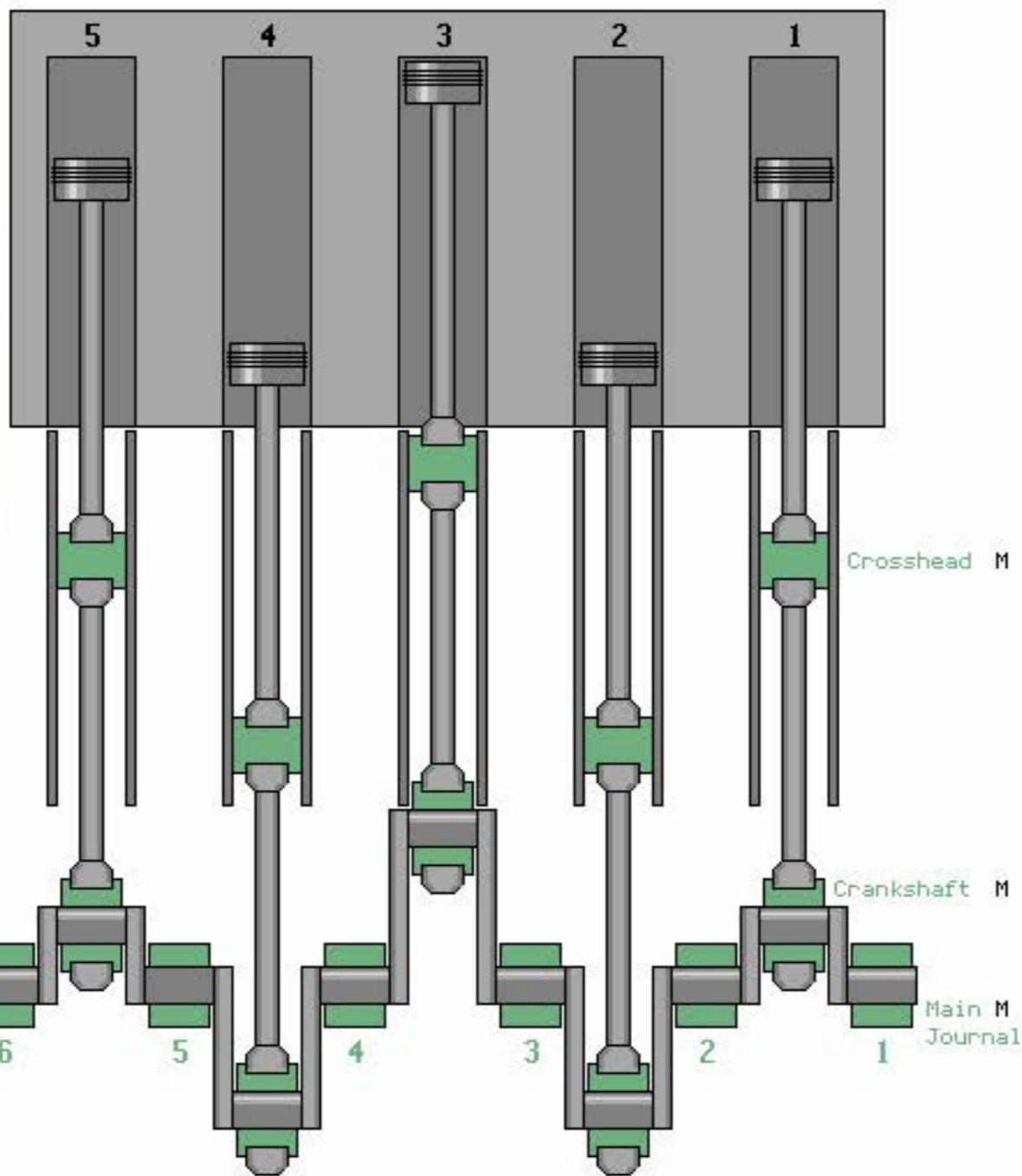
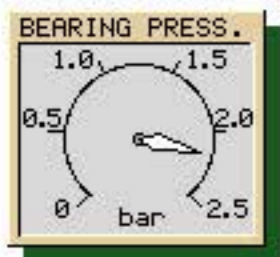
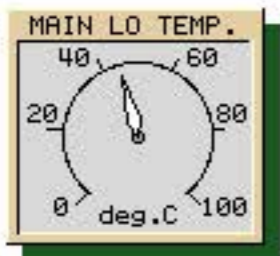
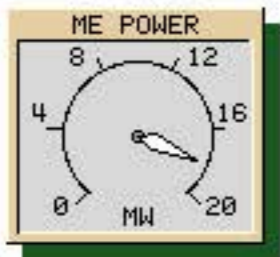
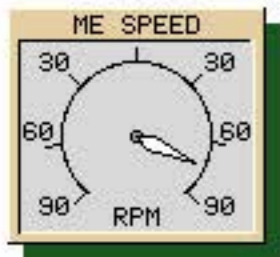
Fuel link position
X 94.40

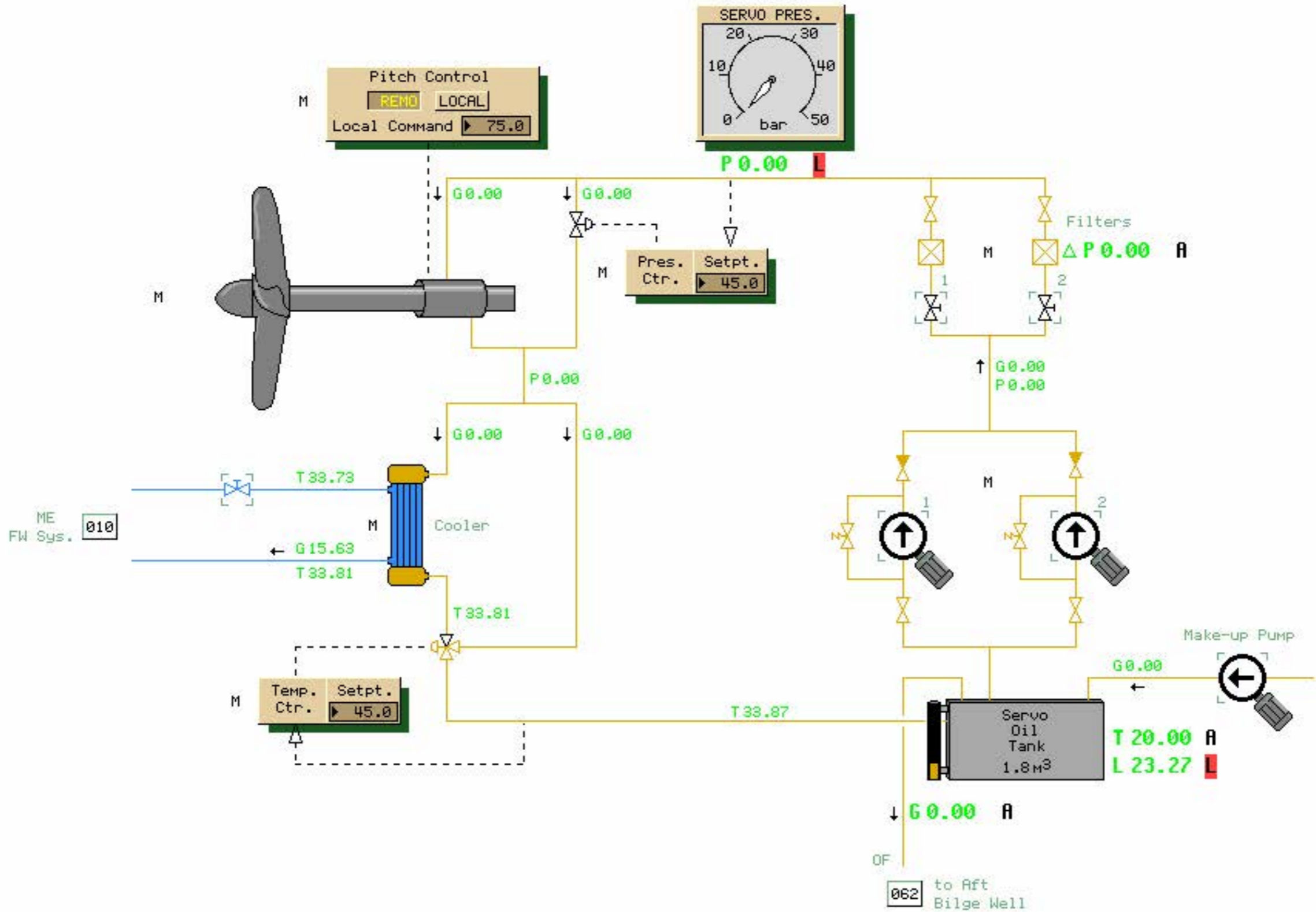
SUPER-VIT

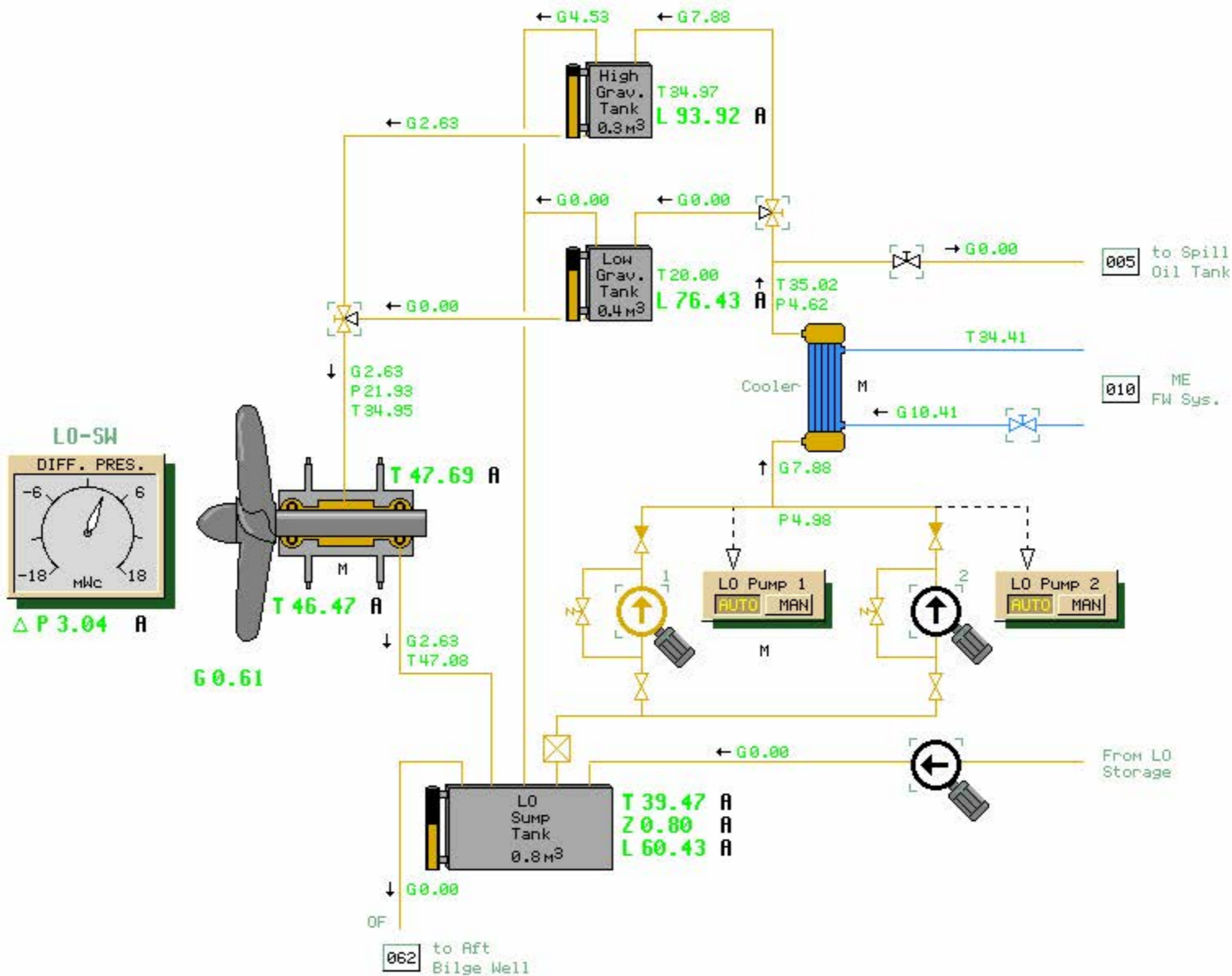
System Collective Adj.
 ON ▶ 50.0

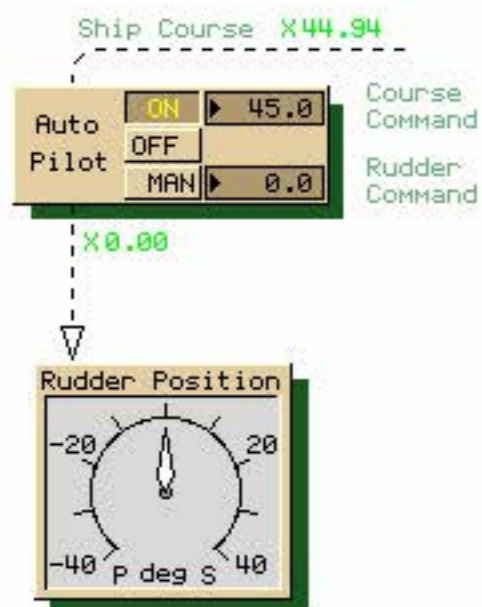
Starting point (%) ▶ 65.0
 Break-point (%) ▶ 85.0
 Ending point (%) ▶ 105.0











SHIP CONDITION

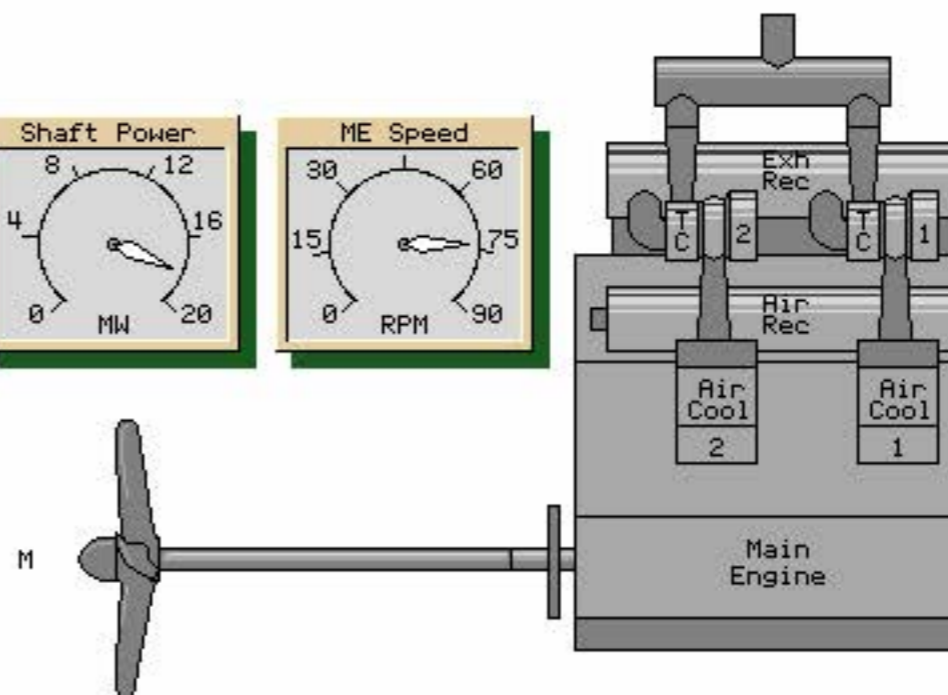
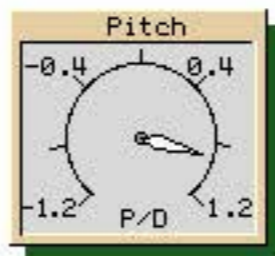
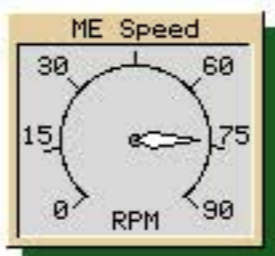
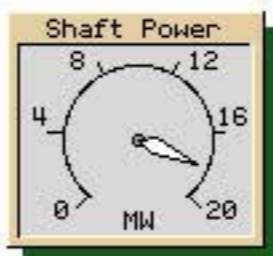
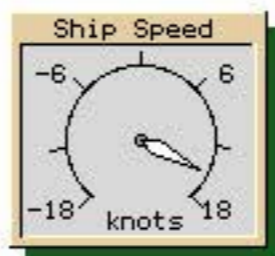
Ship Load X99.25 %
 Trim X0.02 m
 Heel X0.00 deg
 Turning Rate R0.00

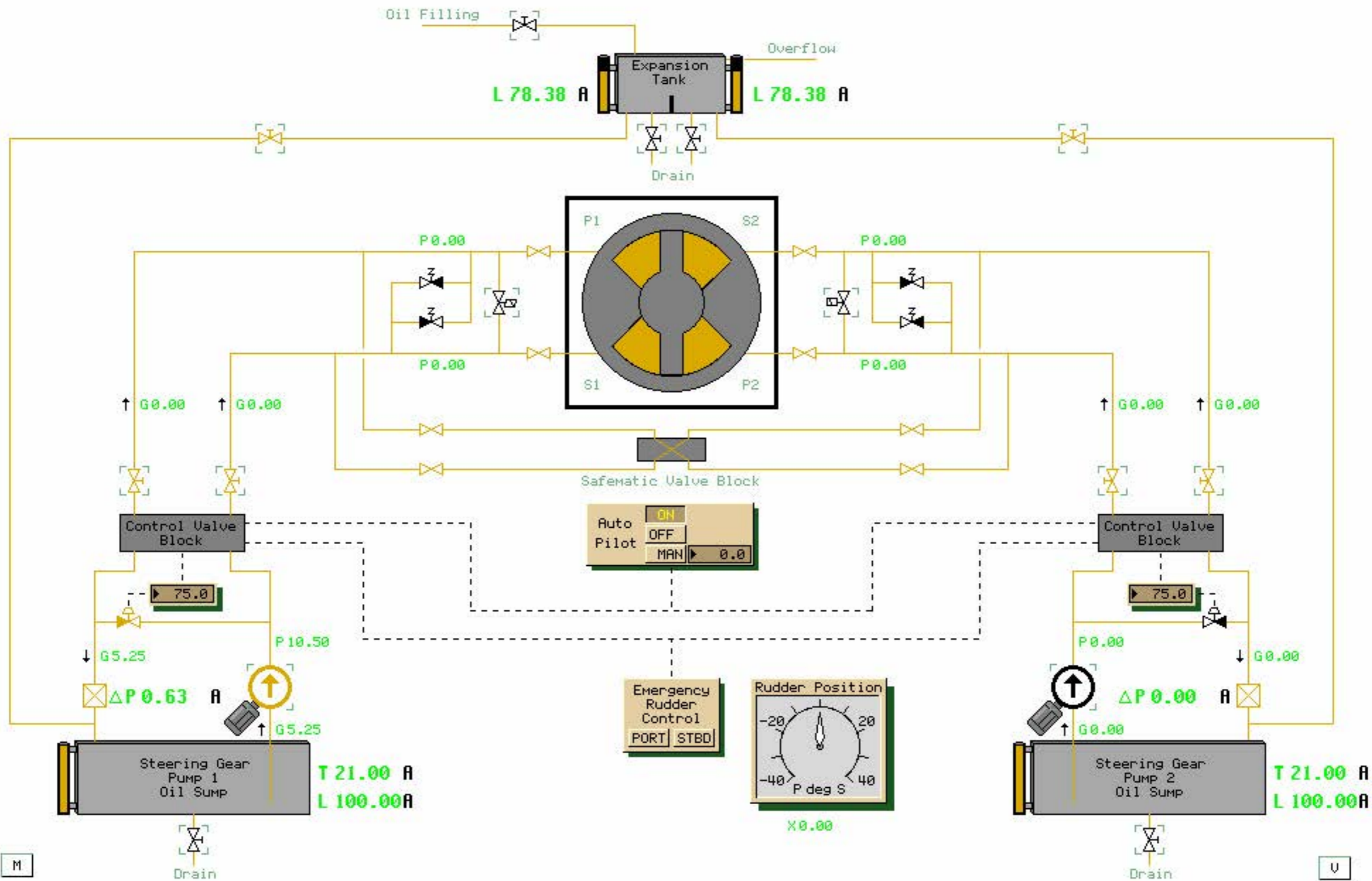
Ship Speed N15.02 knot
 Prop. Speed N74.00 RPM
 Prop. Power E17.98 MW
 Prop. Thrust Q146.10 ton
 Ship Hull Drag Q146.12 ton
 Prop. Pitch X0.90 P/D

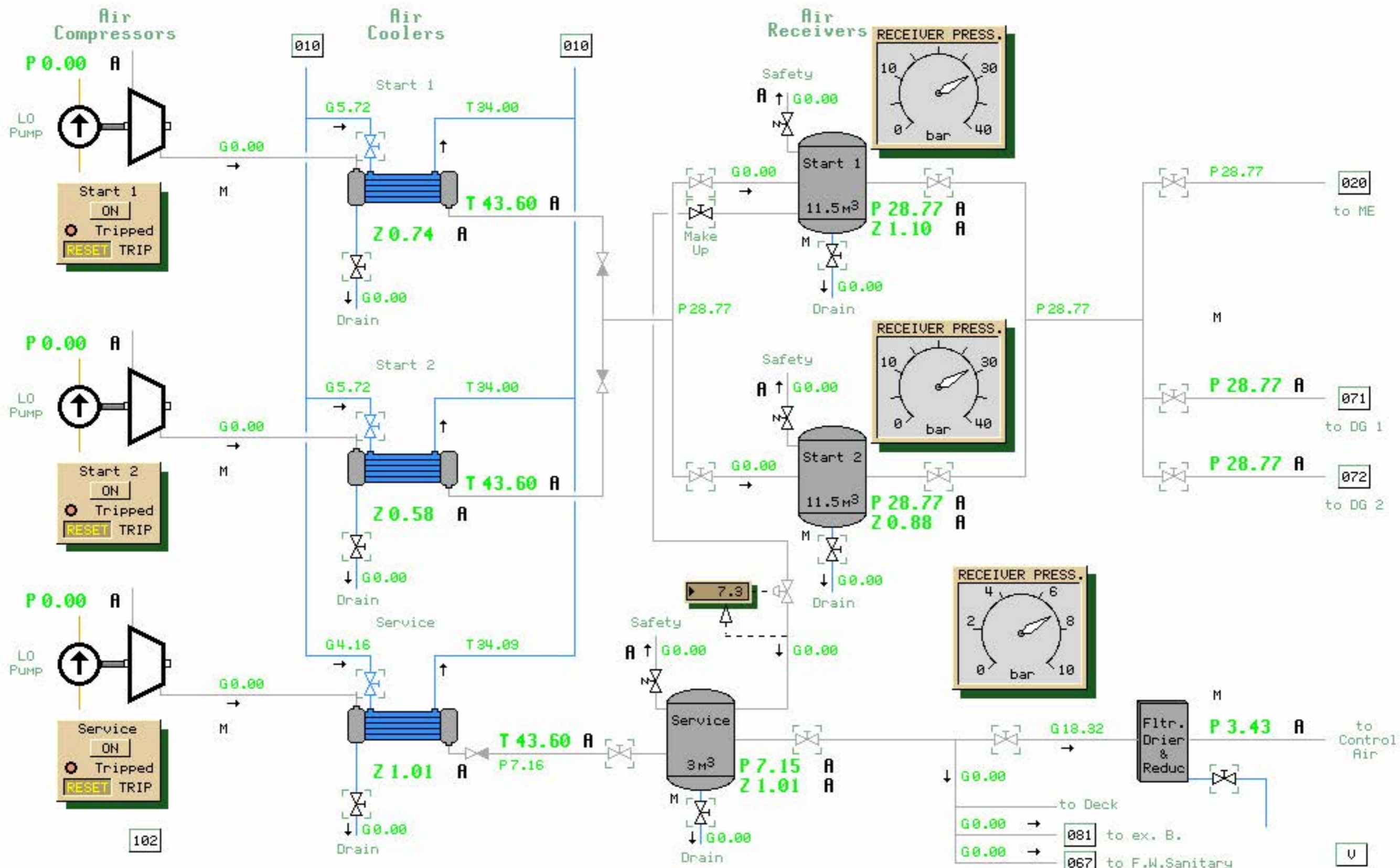
AUTO PILOT

Course Gain C1.50
 Rate Gain C20.00
 Course Deadband C0.10

ME FO Consumption G3506.8 kg/h
 DG FO Consumption G0.00 kg/h

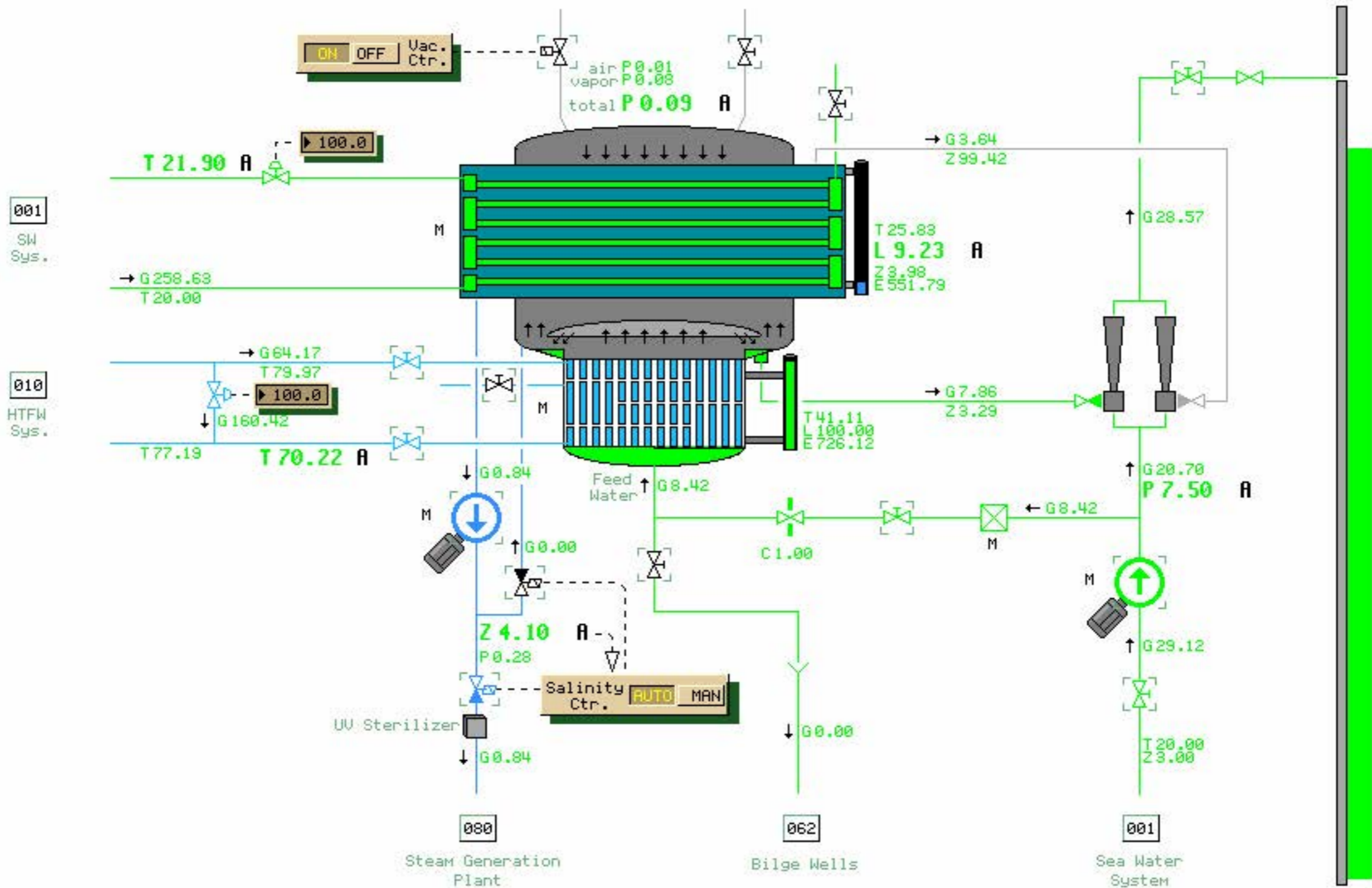


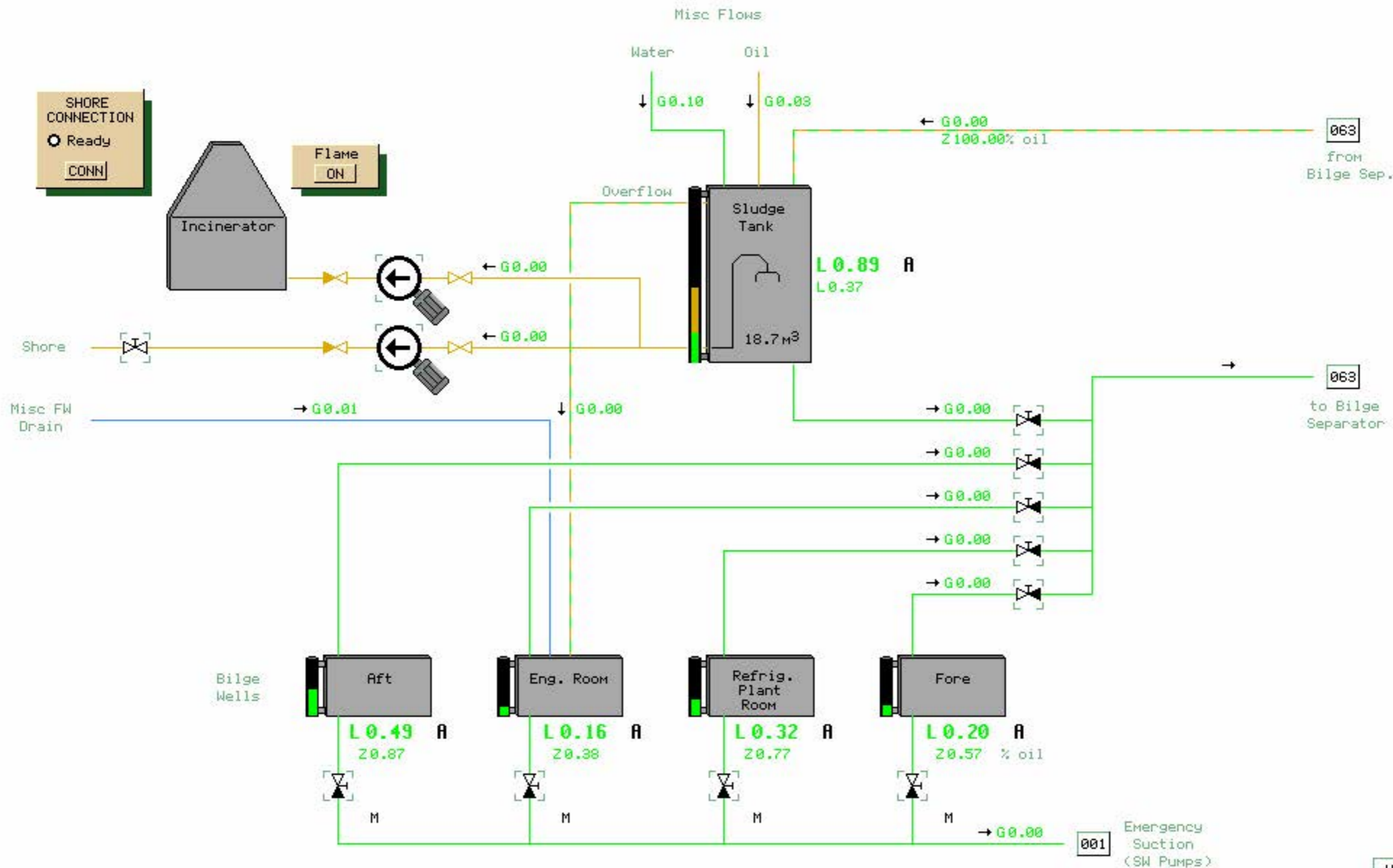


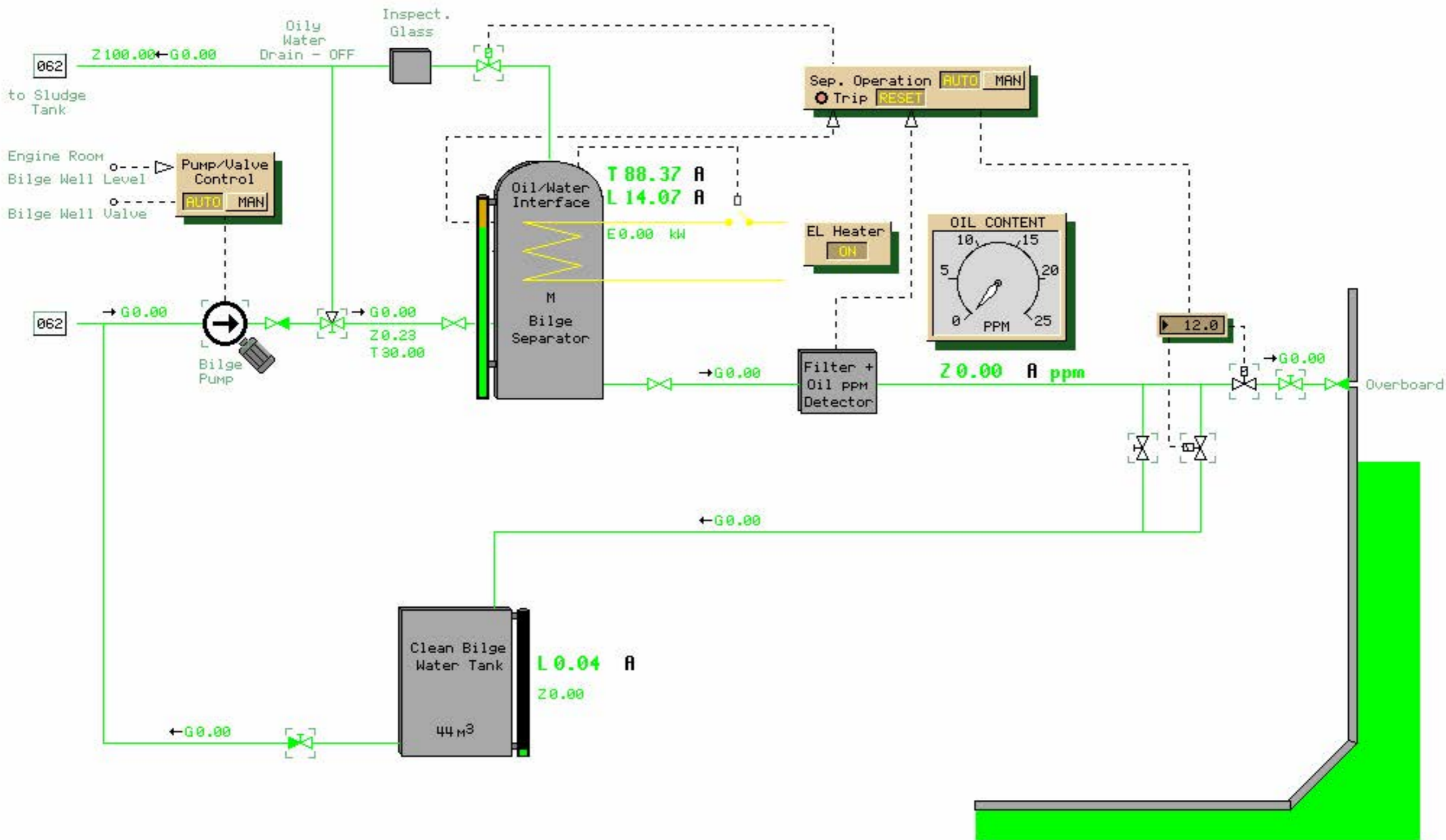


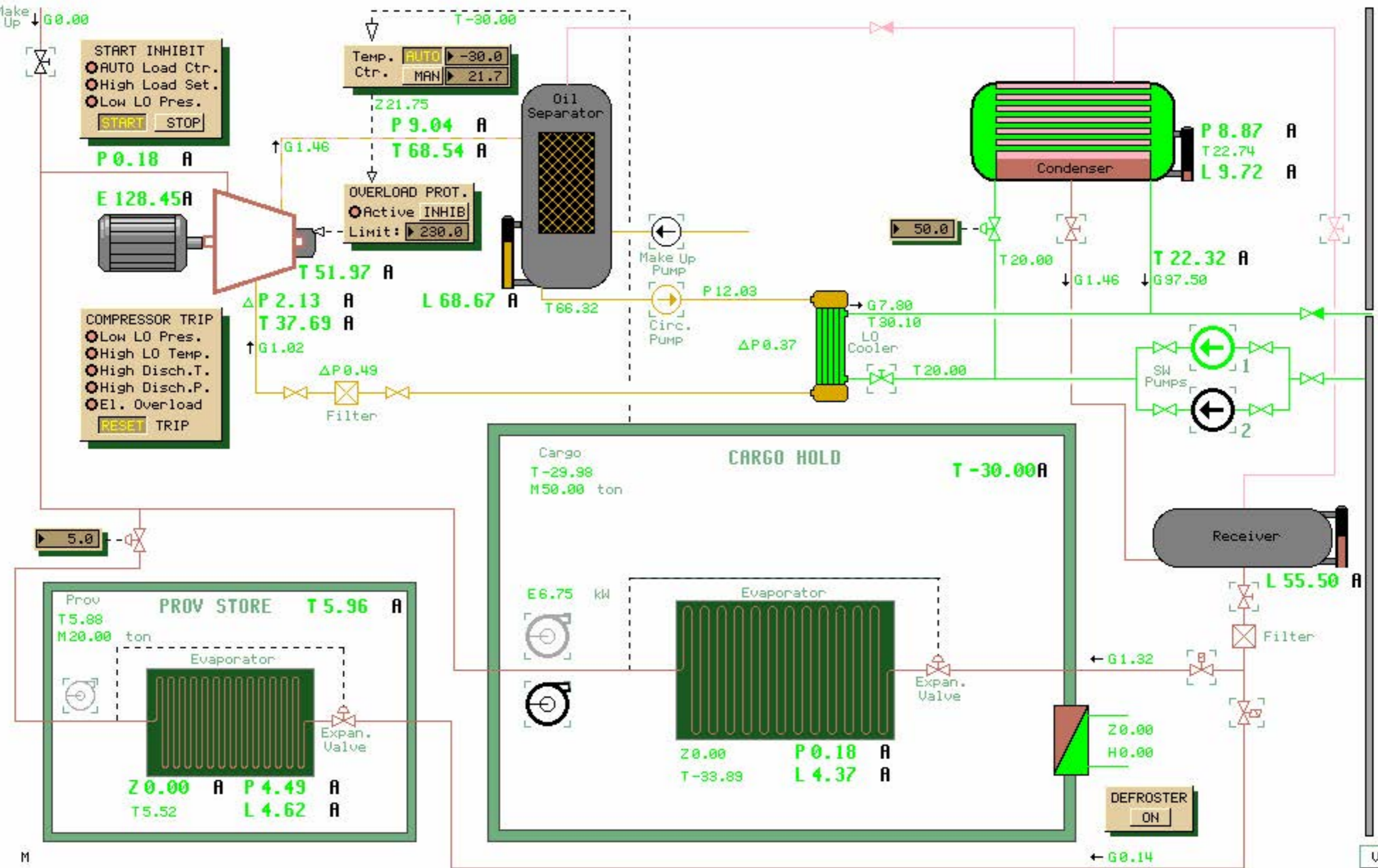
102

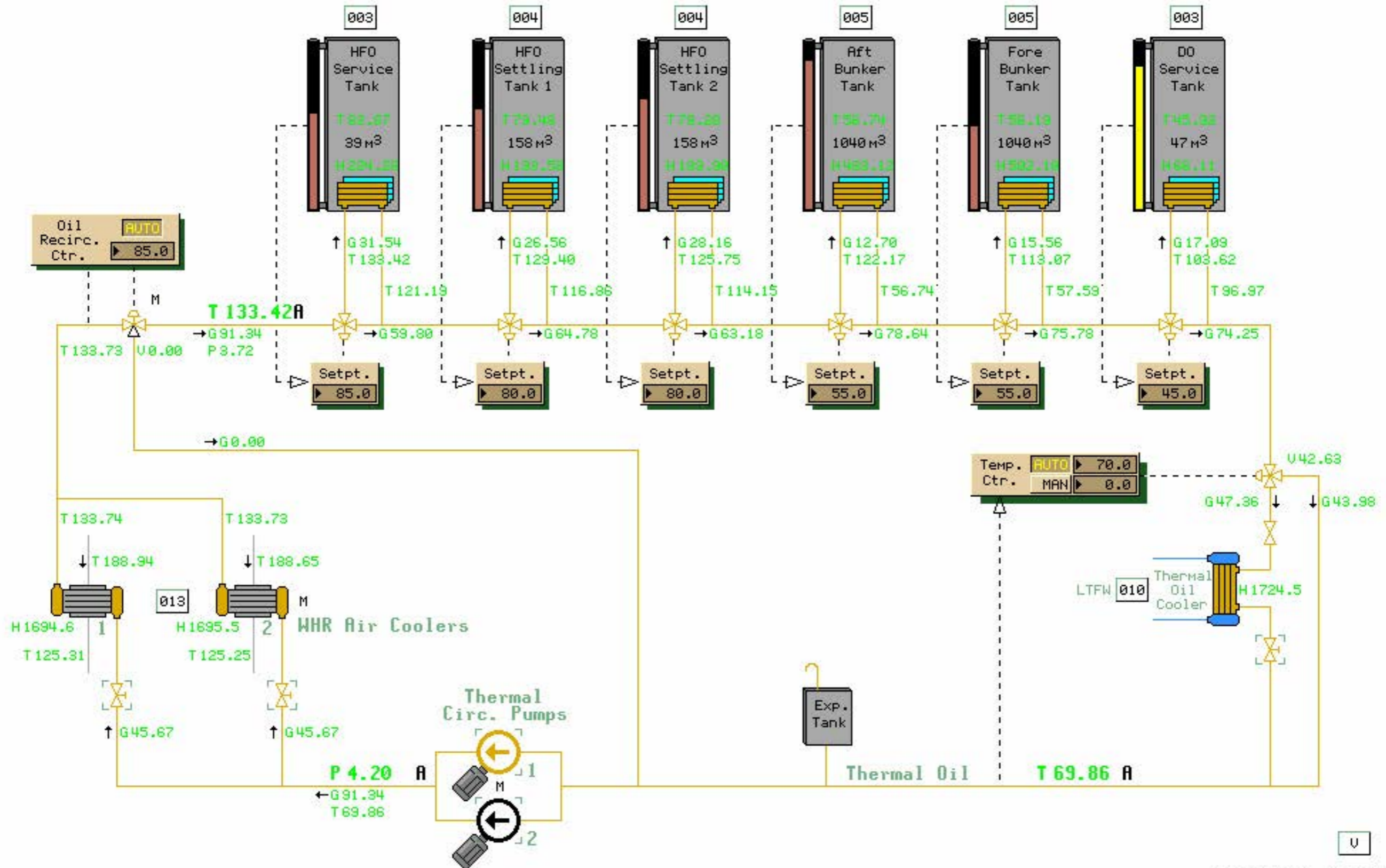
U





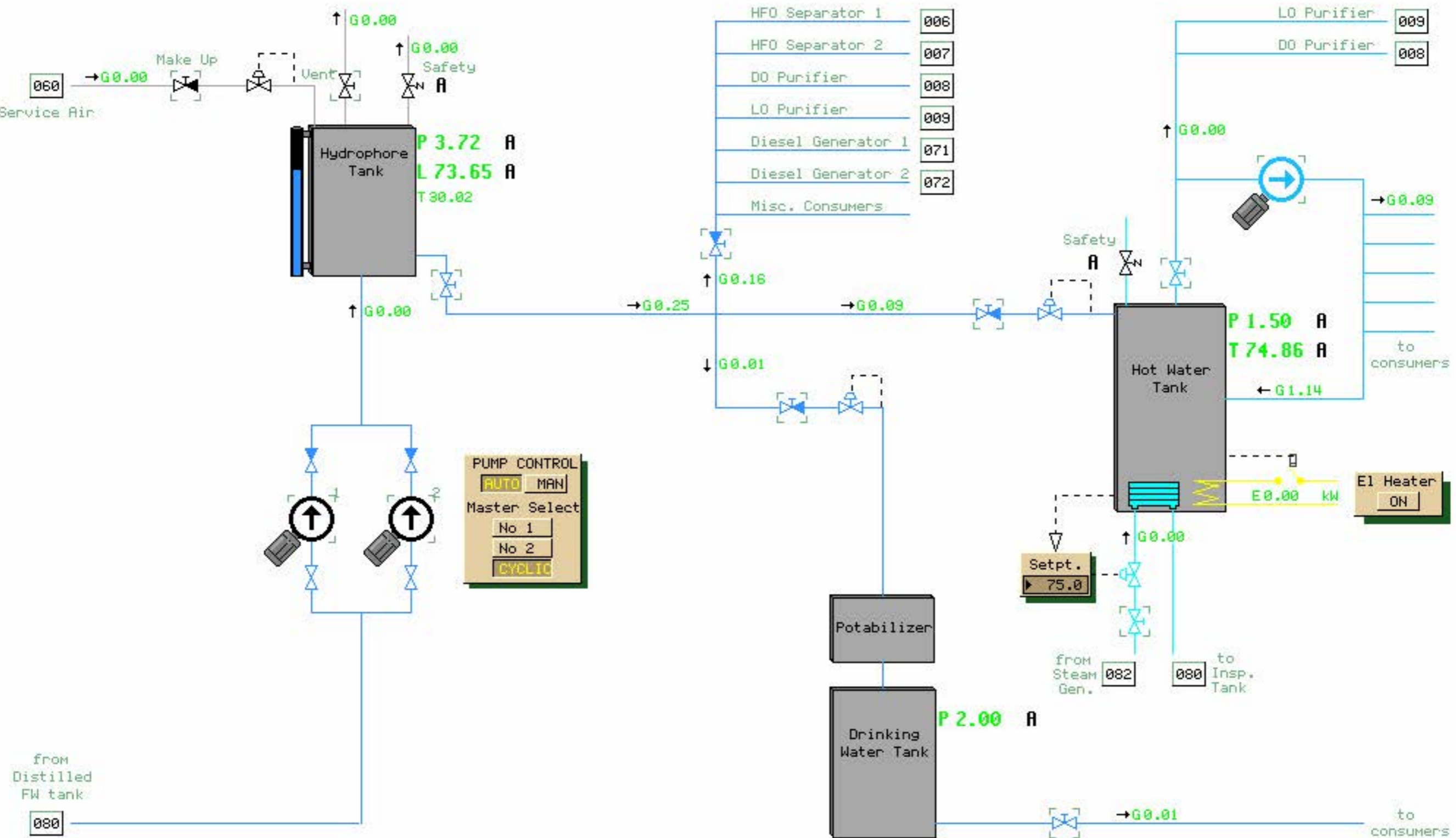


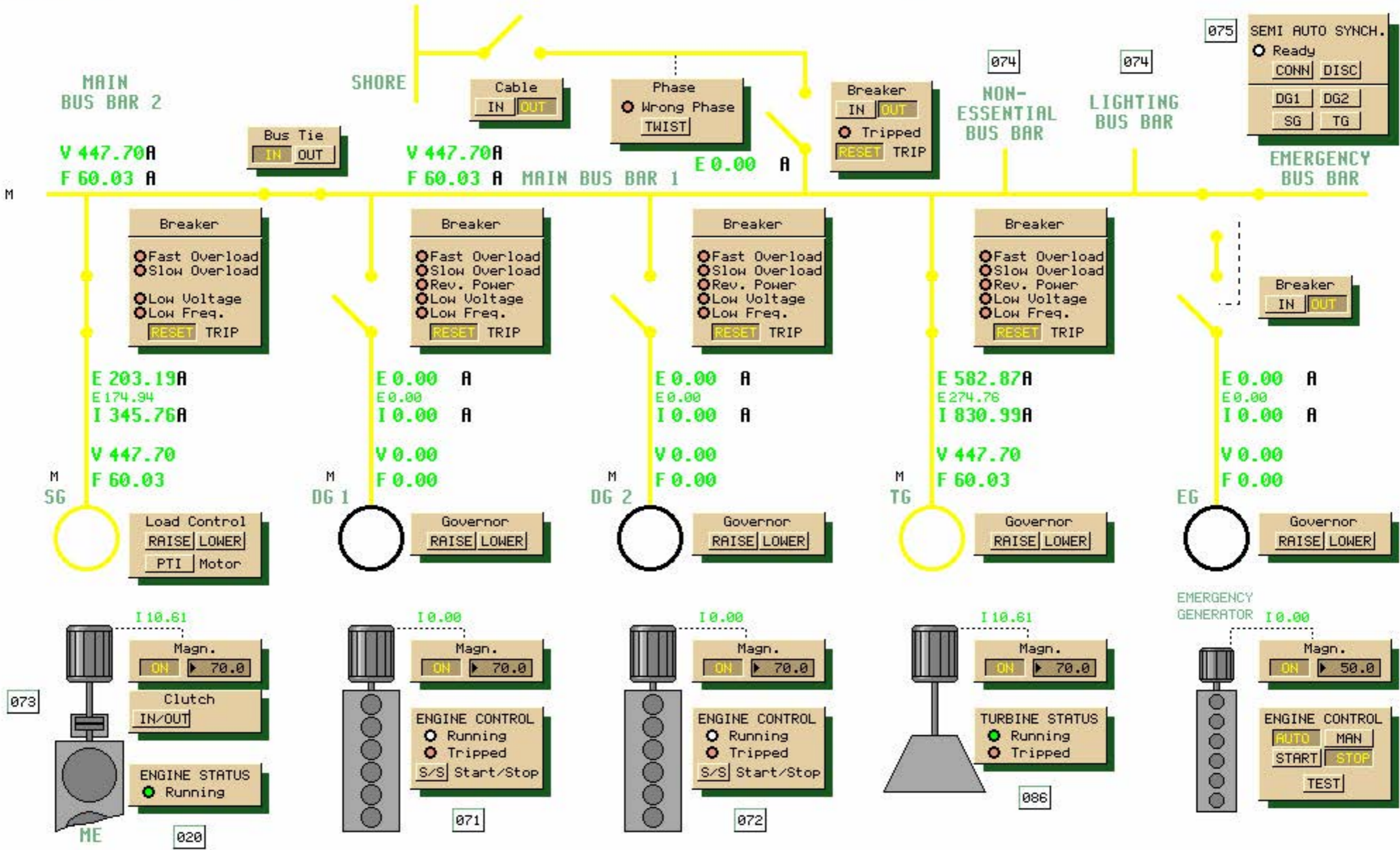


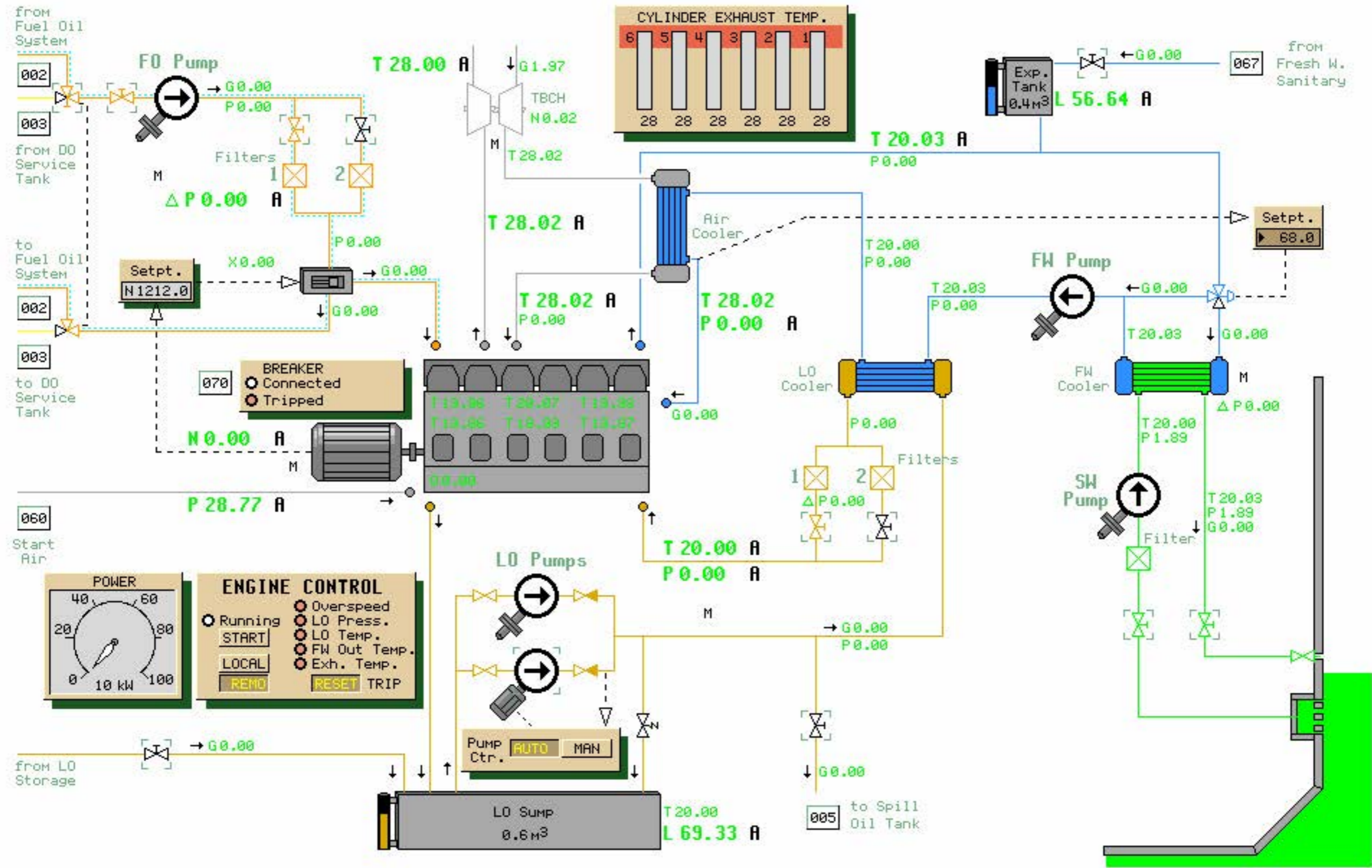




HFO Separator 1	006
HFO Separator 2	007
DO Purifier	008
LO Purifier	009
Diesel Generator 1	071
Diesel Generator 2	072
Misc. Consumers	



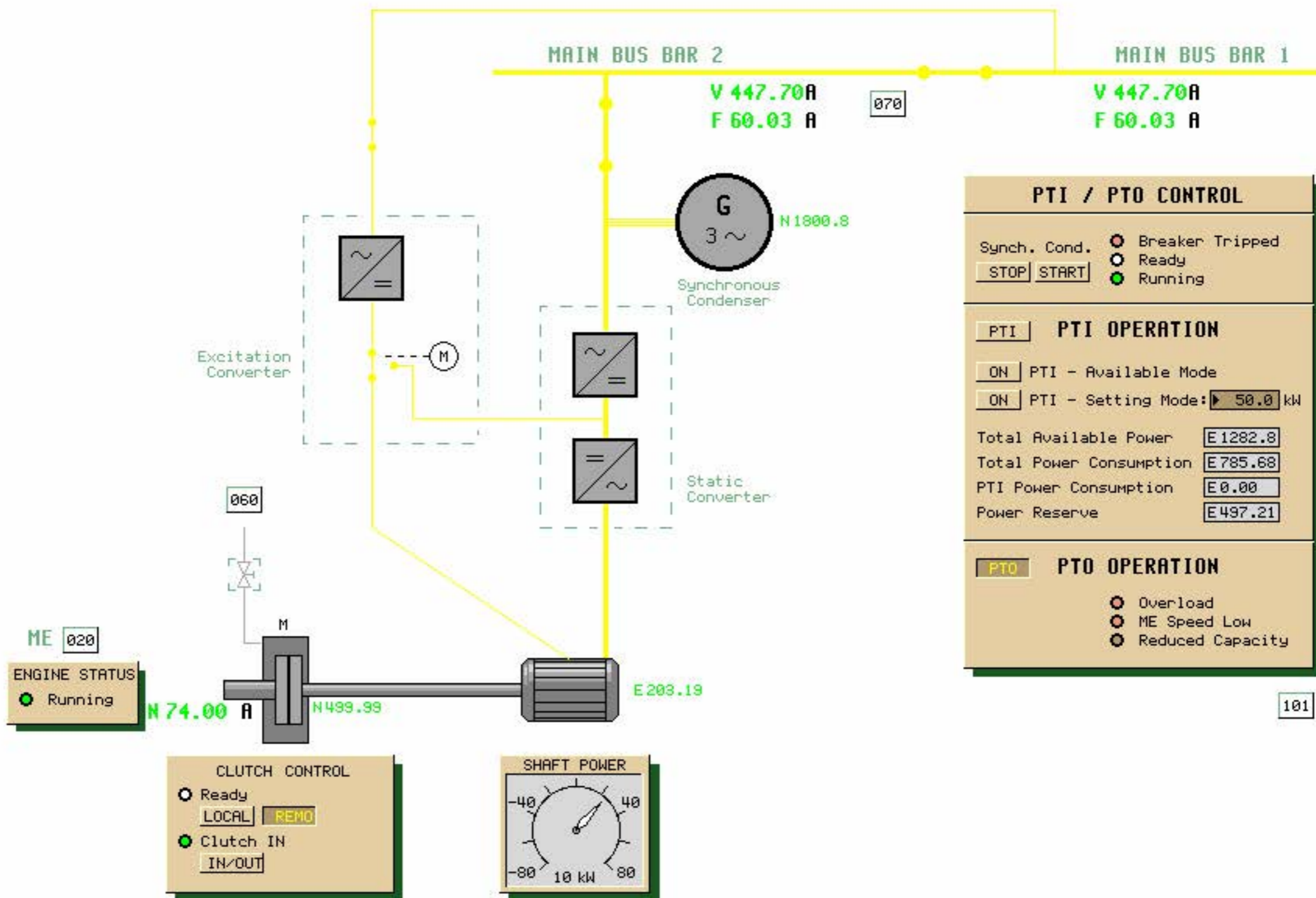




POWER
Gauge: 0 to 100 kW, needle at ~40 kW.

ENGINE CONTROL

- Running (indicated)
- START button
- LOCAL button
- REMO button
- RESET button
- TRIP button
- Over-speed indicator
- LO Press. indicator
- LO Temp. indicator
- FW Out Temp. indicator
- Exh. Temp. indicator



PTI / PTO CONTROL

Synch. Cond. Breaker Tripped
 Ready
 Running

PTI OPERATION

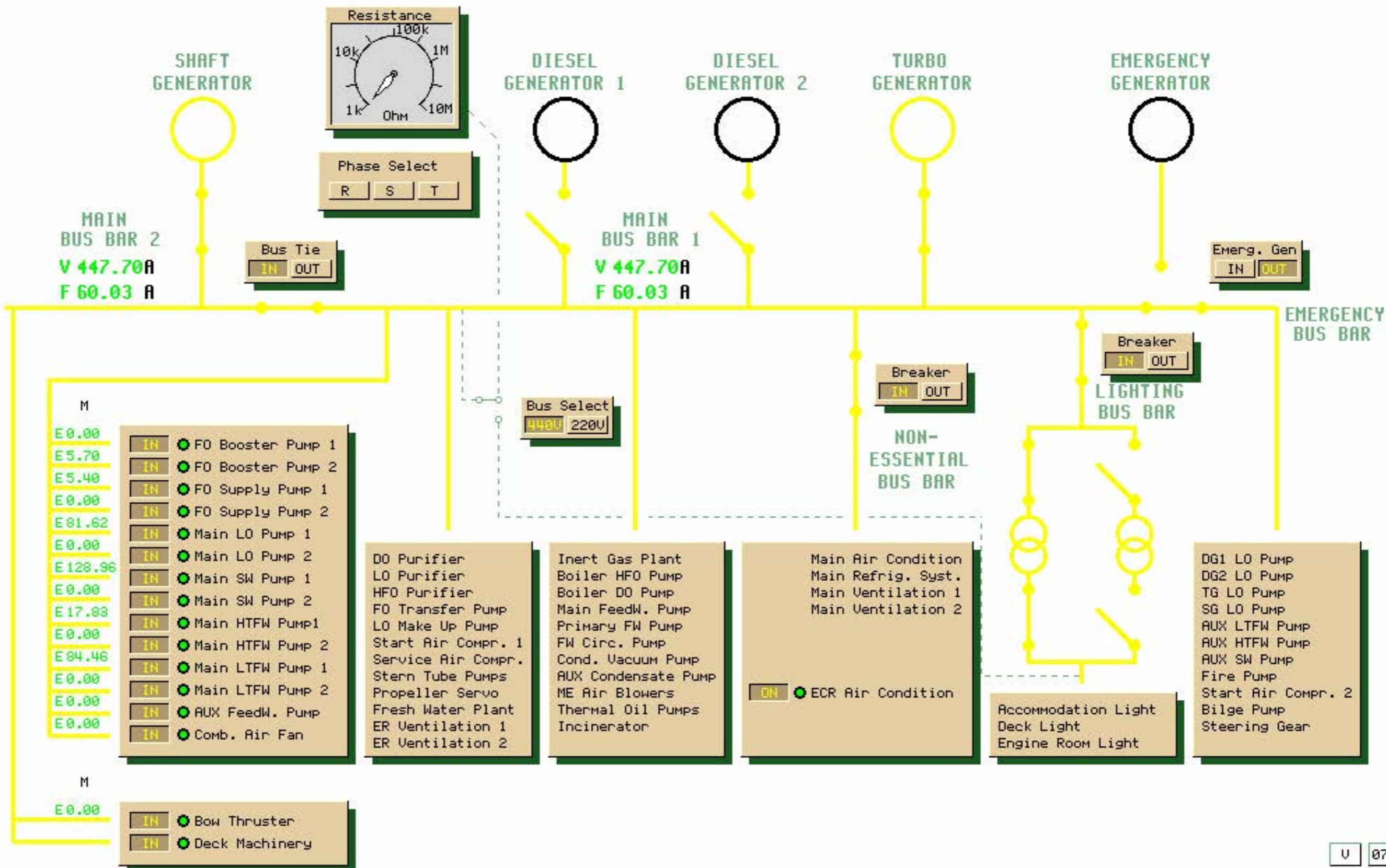
PTI - Available Mode
 PTI - Setting Mode: kW

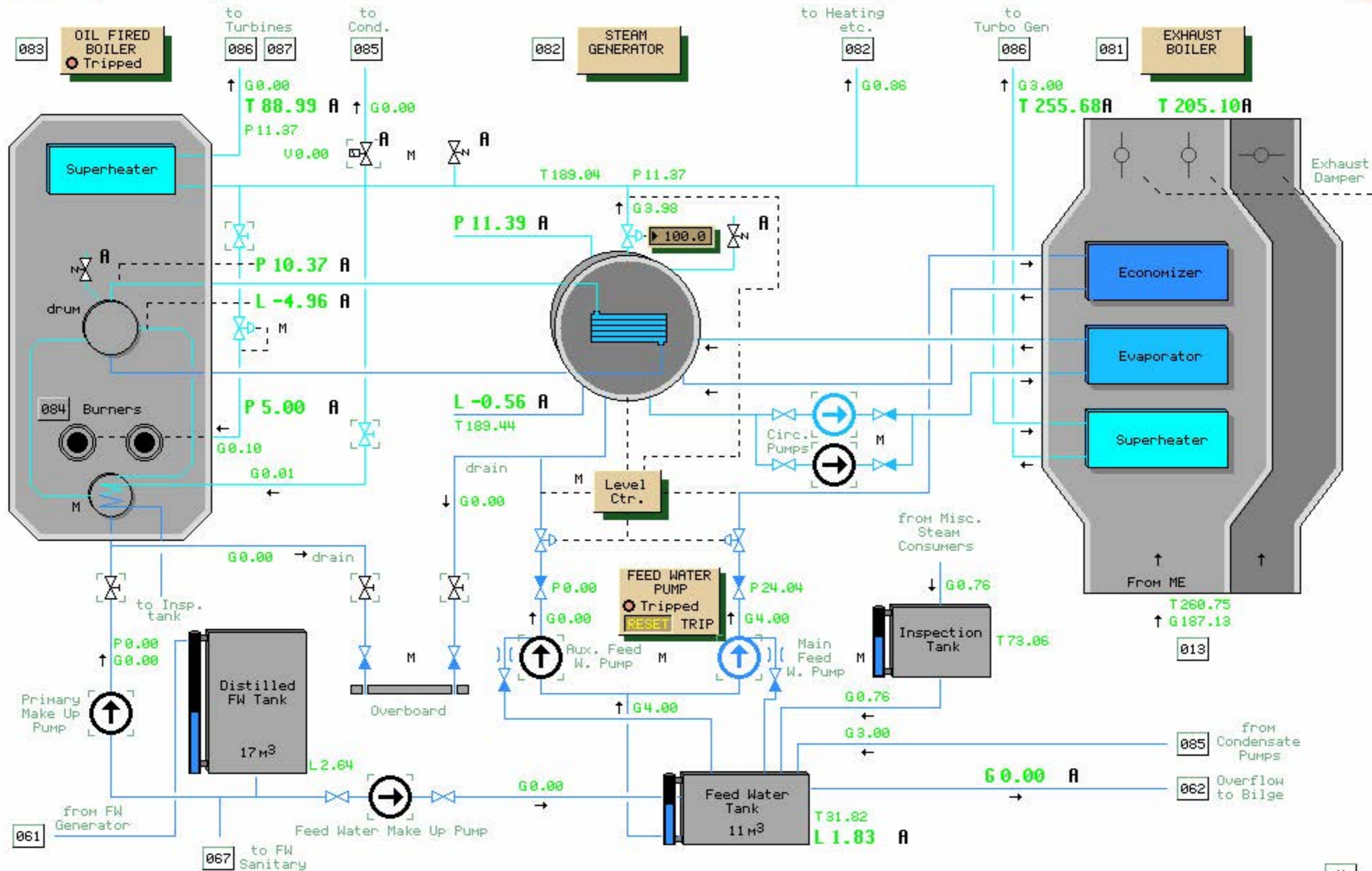
Total Available Power
 Total Power Consumption
 PTI Power Consumption
 Power Reserve

PTO OPERATION

Overload
 ME Speed Low
 Reduced Capacity

101



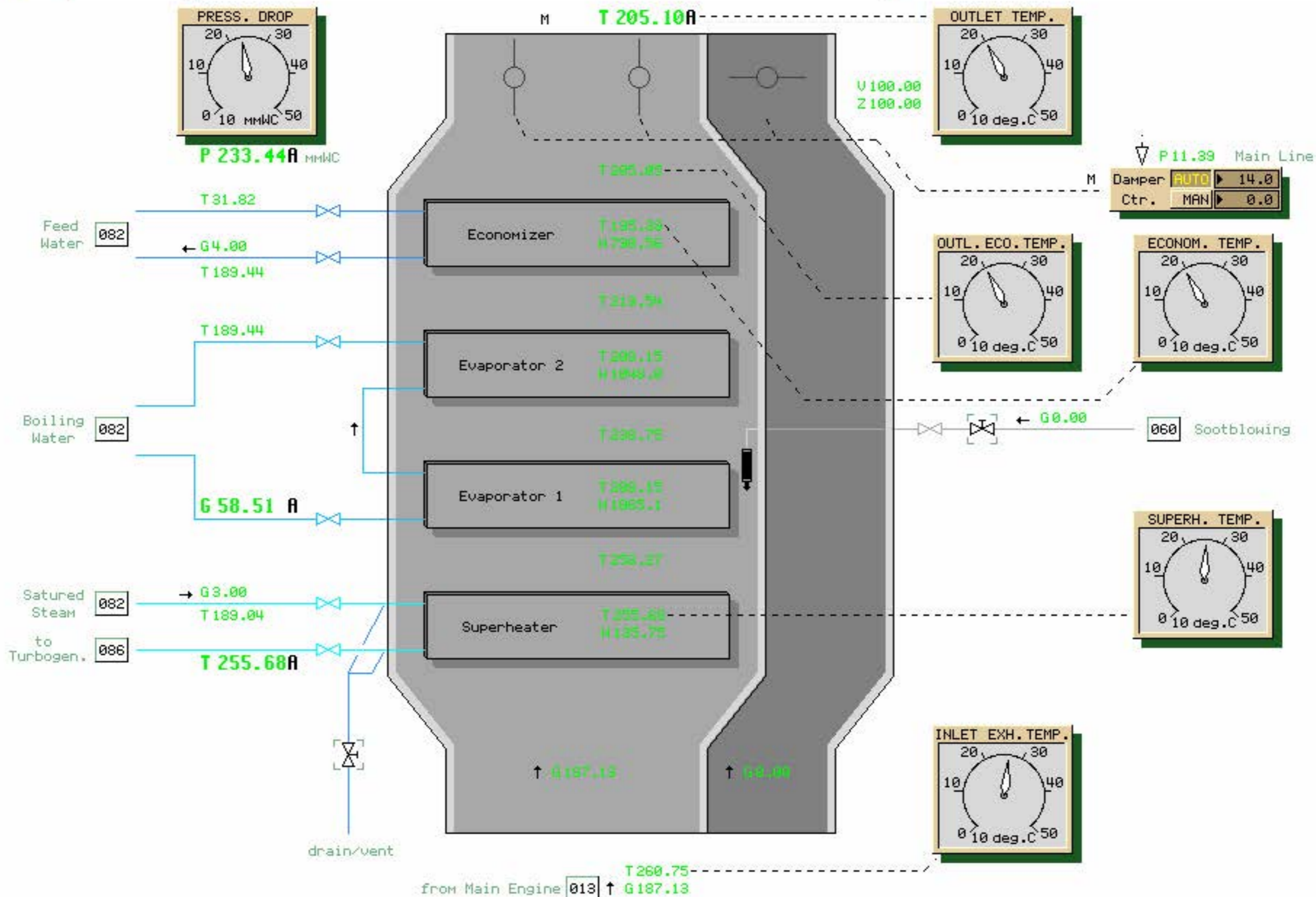


00:00:00
Freeze

Picture
MD 81

Exhaust Boiler

Alarm
Group



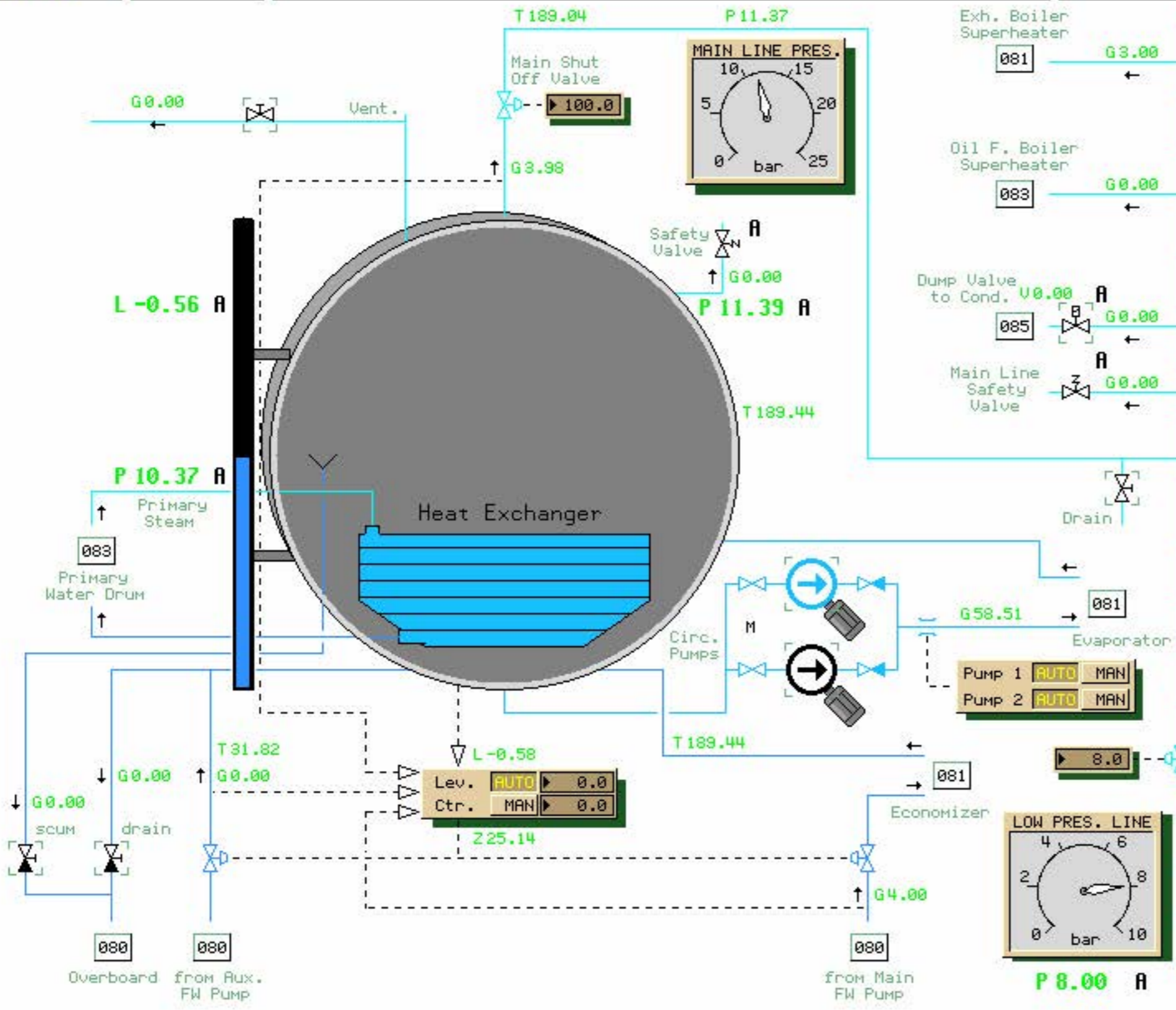
U

00:00:00
Freeze

Picture
MD 82

Steam Generator

Alarm
Group

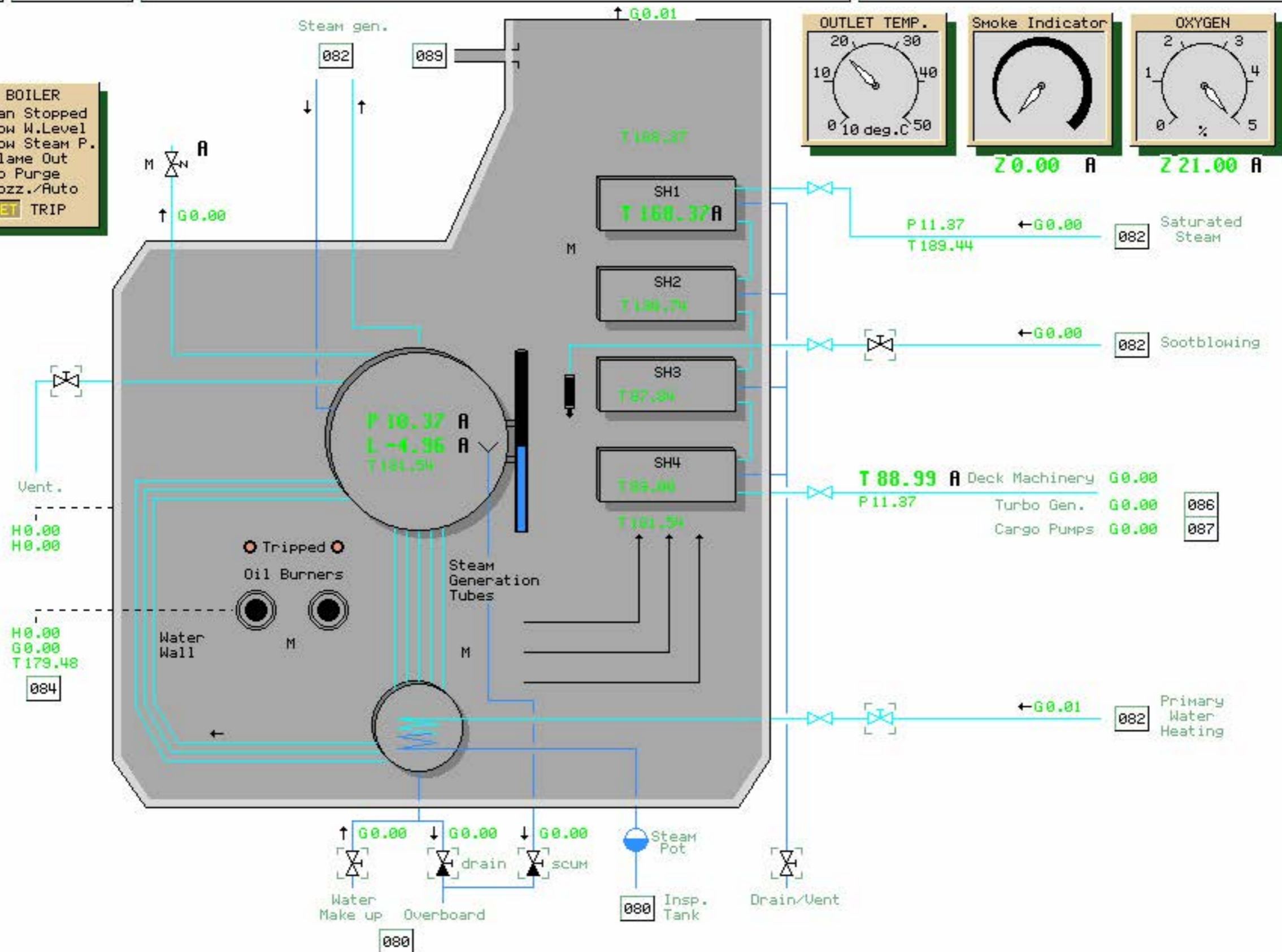


Exh. Boiler Superheater	081	G 3.00	Oilfired B. Sootblowing	→	083
			Bunker Tank Heating	→	005
Oil F. Boiler Superheater	083	G 0.00	Settl. Tank 1 Heating	→	004
			Settl. Tank 2 Heating	→	004
			Service Tank Heating	→	003
Dump Valve to Cond.	085	G 0.00	FO Line Heating	→	002
Main Line Safety Valve		G 0.00	Prim. Water Heating	→	083
			Atomizing Steam	→	084
			Boiler FO Heater	→	084
			ME FO Heaters	→	002
			ME Preheater	→	010
			Sanitary Water Heating	→	067
			Accommodation	→	
			HFO Separator Heater	→	006
			DO Purifier Heater	→	008
			LO Purifier Heater	→	009

U



- BOILER**
- Fan Stopped
 - Low W.Level
 - Low Steam P.
 - Flame Out
 - No Purge
 - Nozz./Auto
- RESET** TRIP



OUTLET TEMP.

20 30 40 50
10 0 10 deg.C

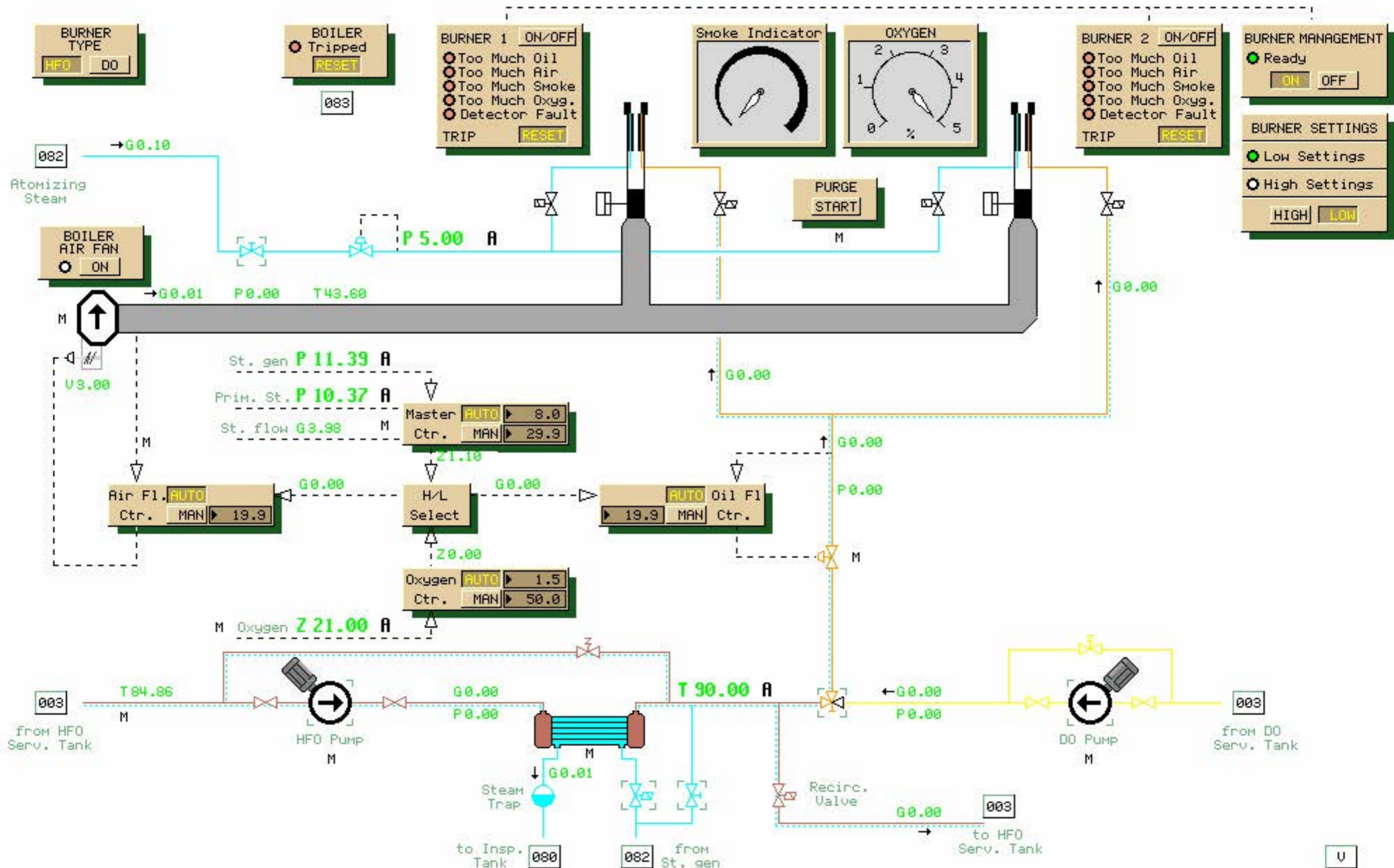
Smoke Indicator

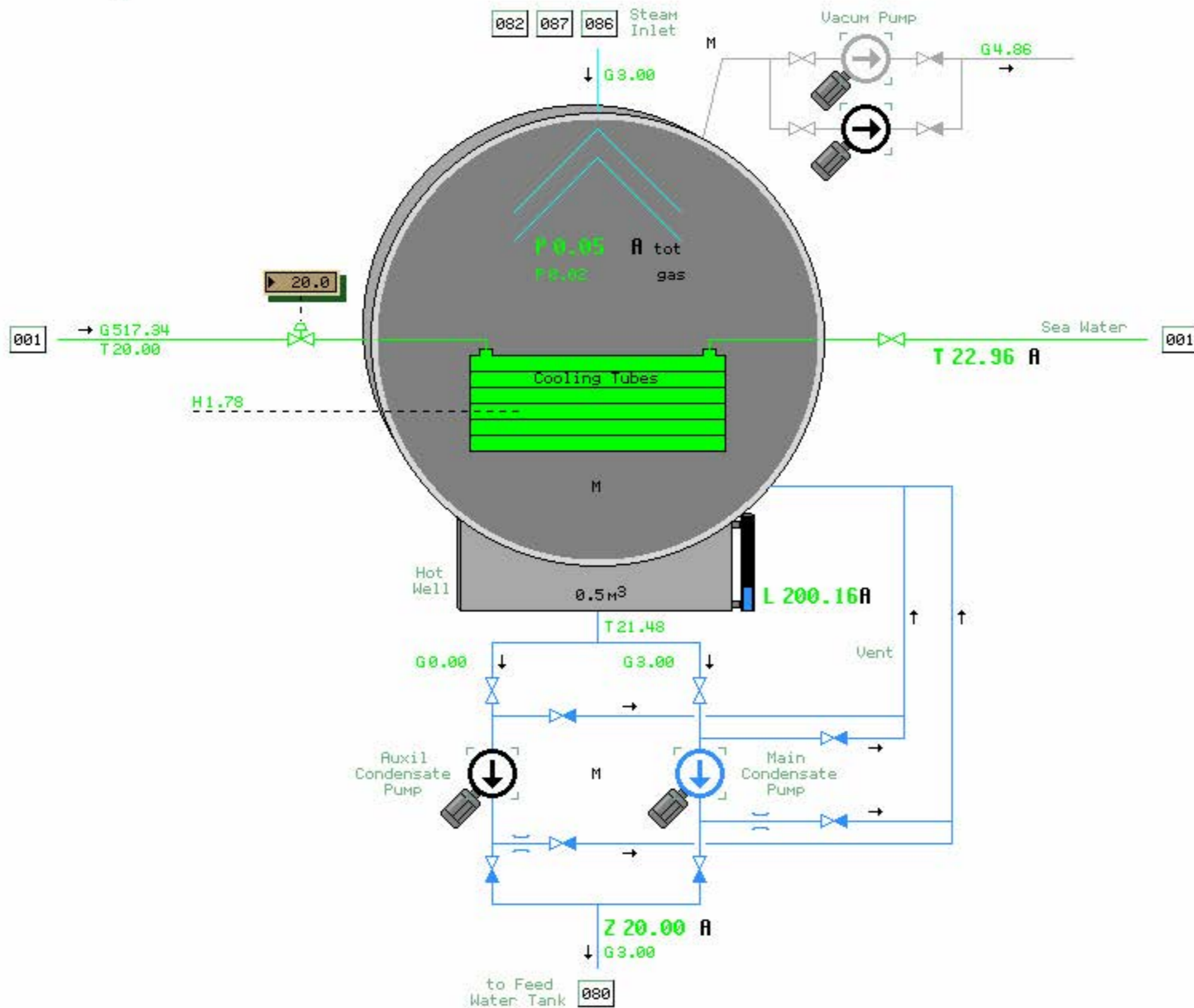
20.00 A

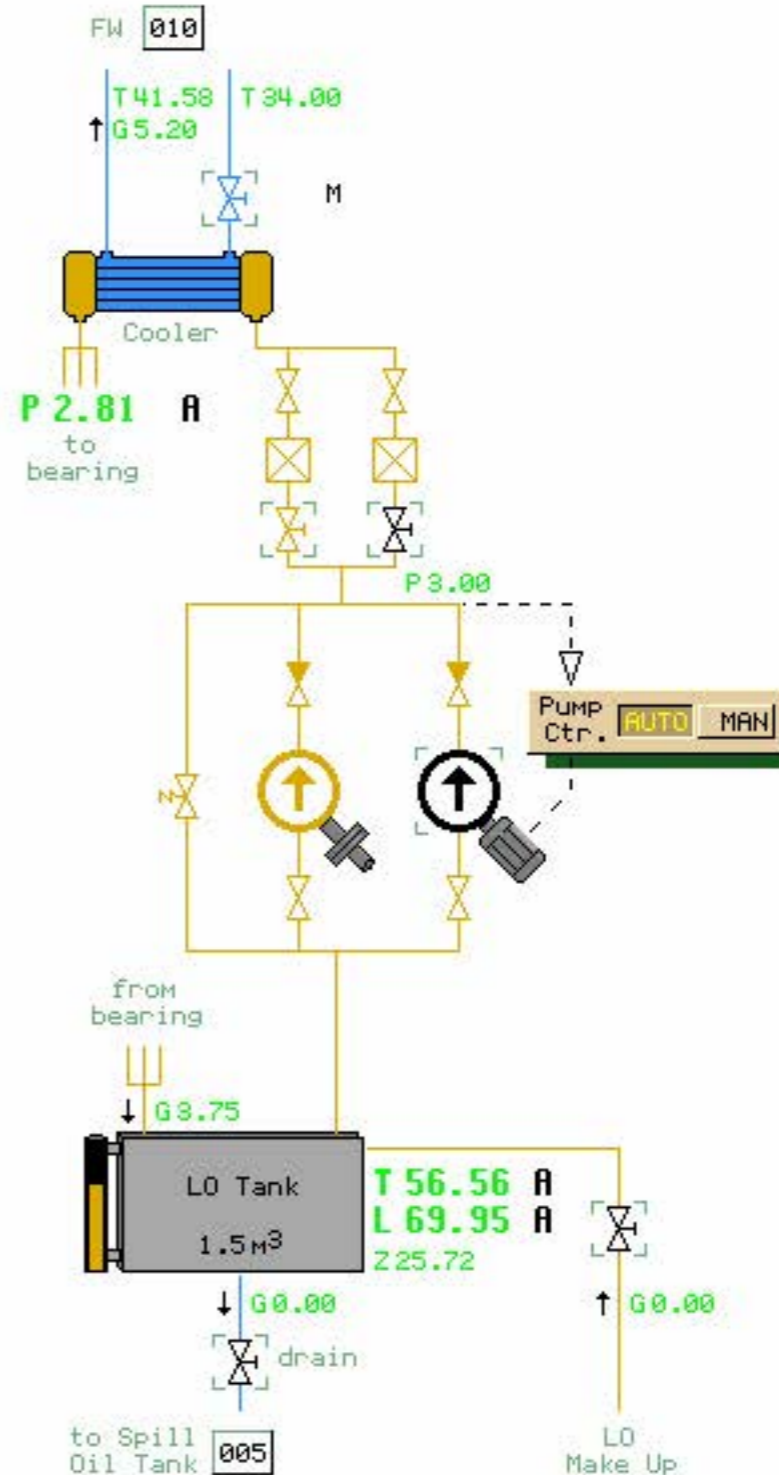
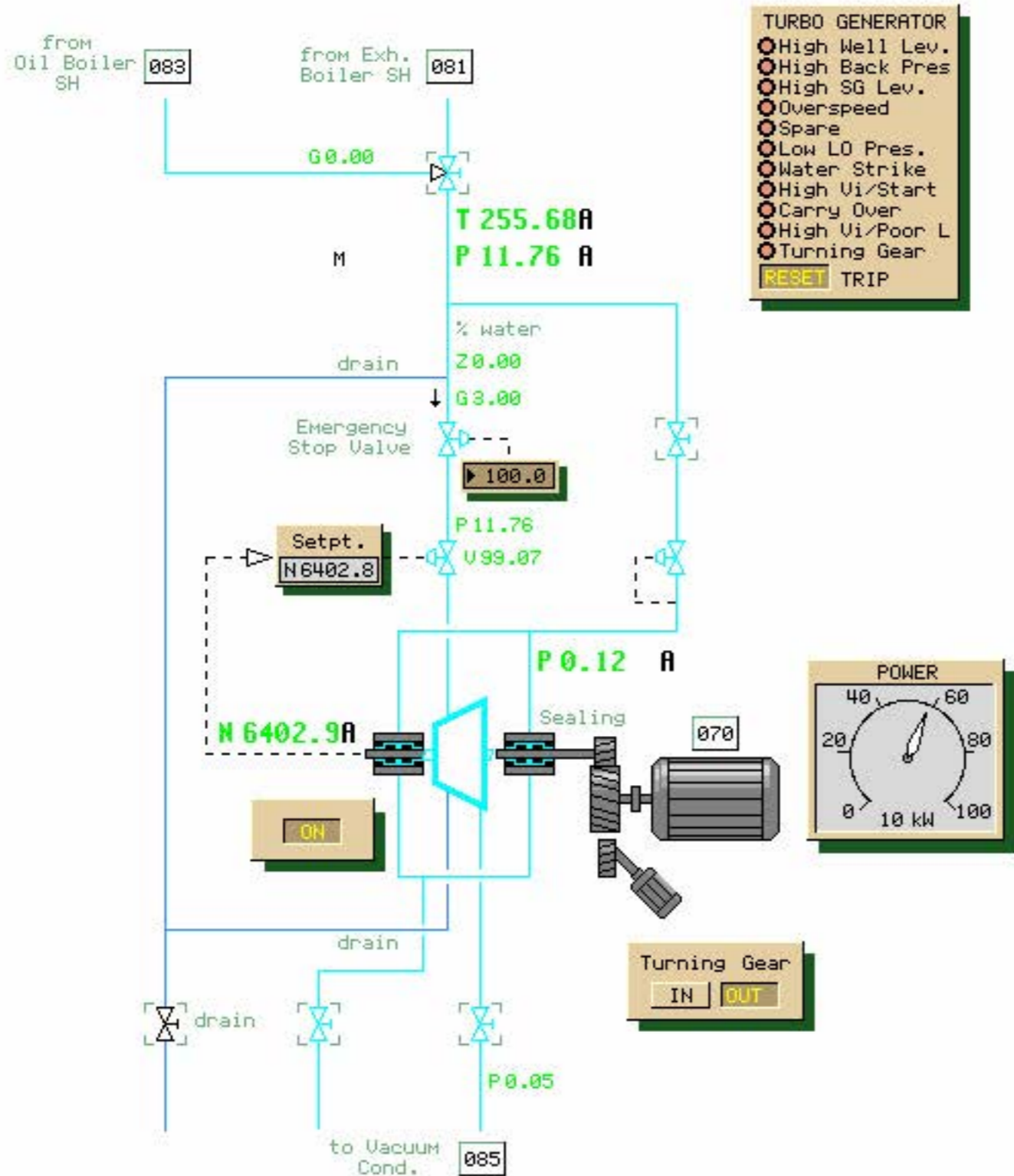
OXYGEN

2 3 4 5
1 0 1/2

221.00 A

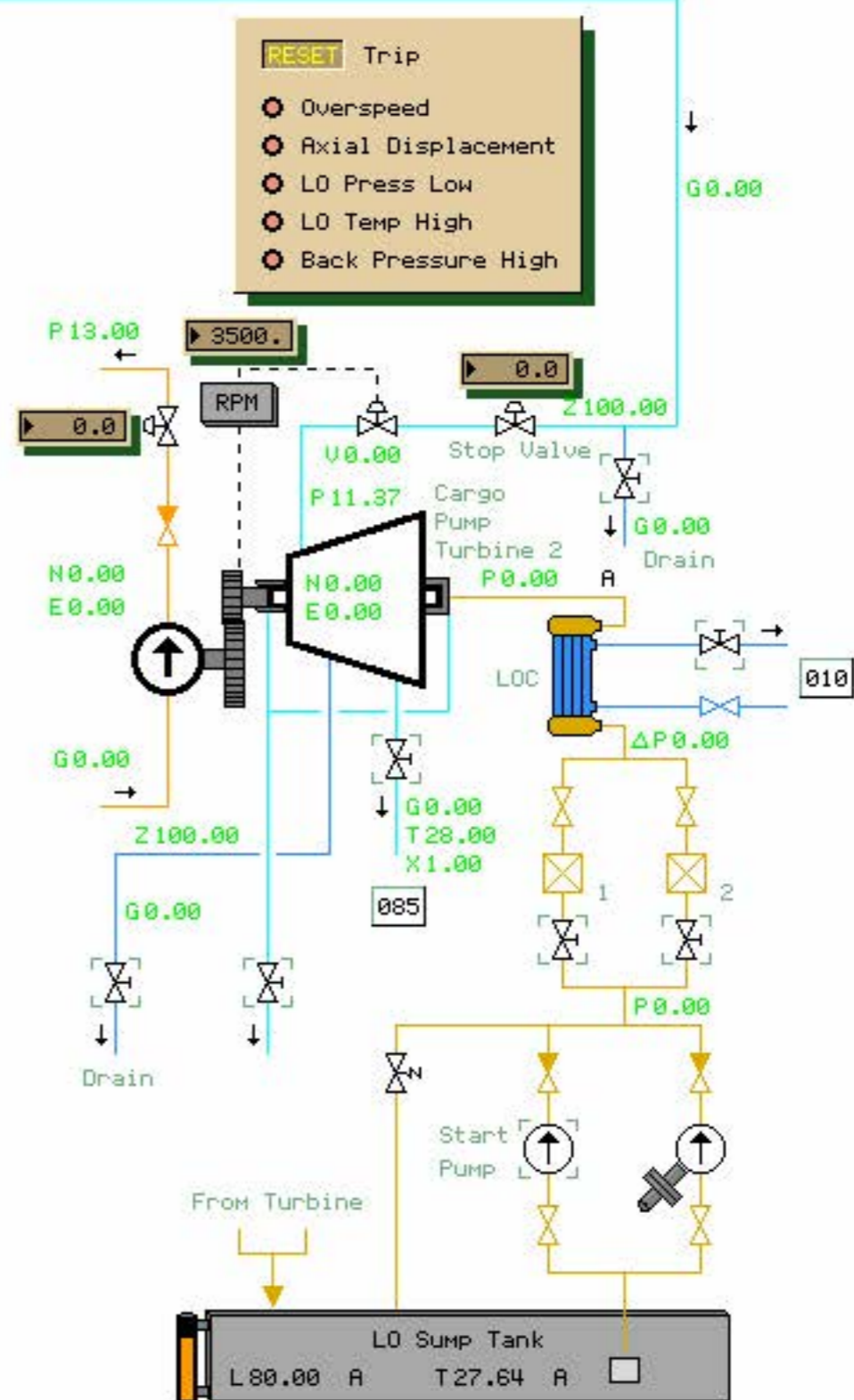
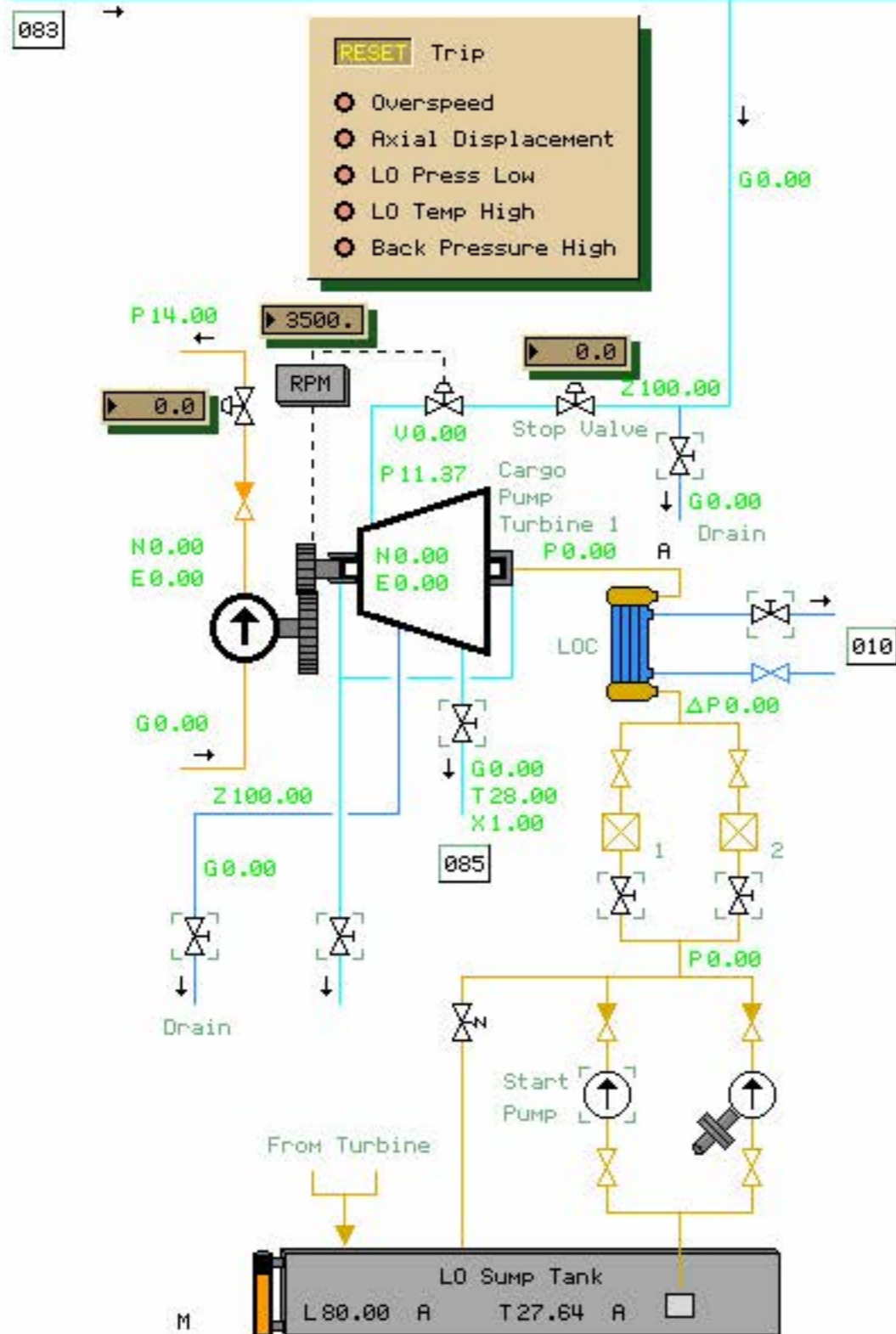




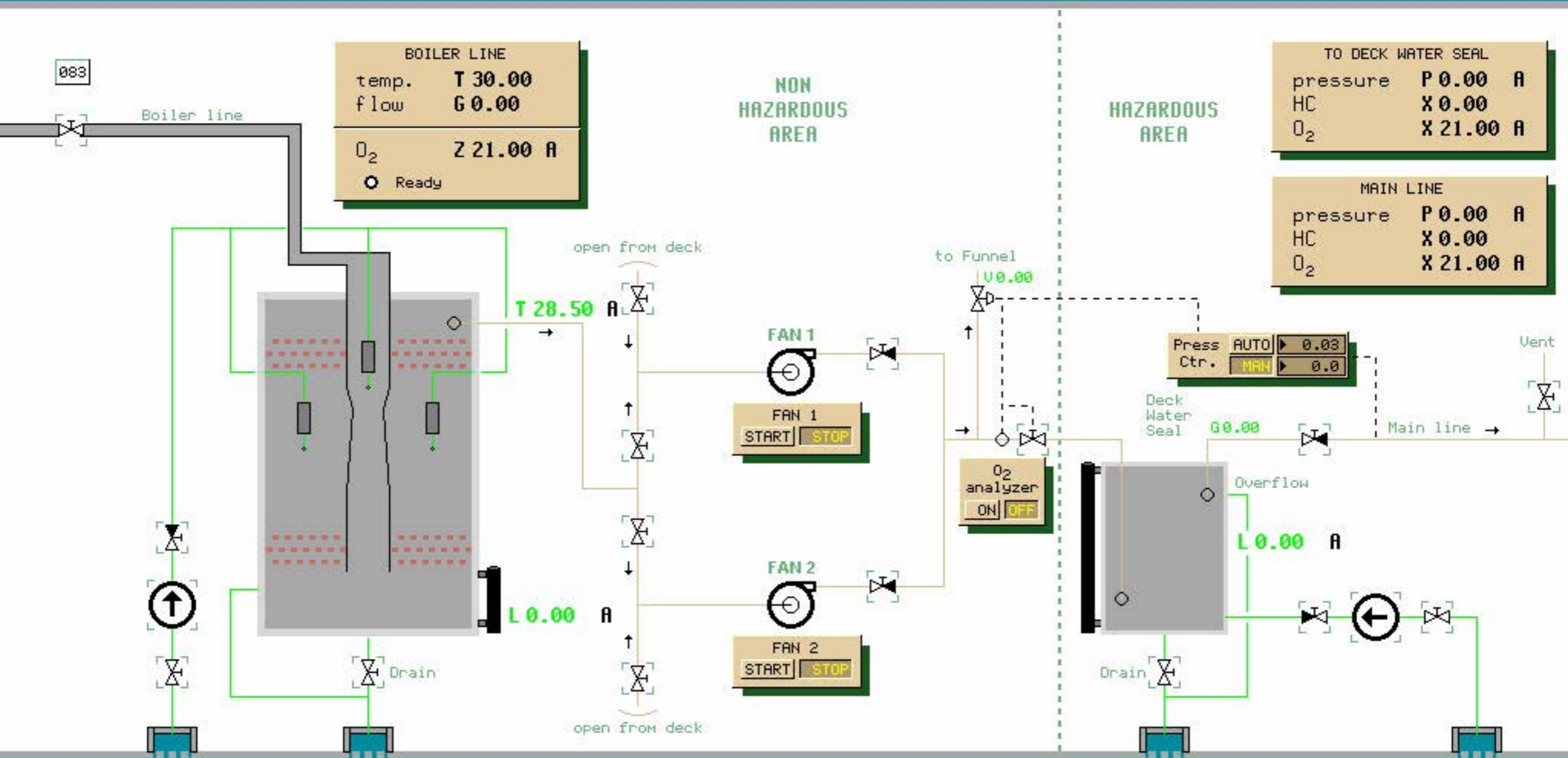




From Oil Boiler SH T 88.99 A P 11.37 G 0.00

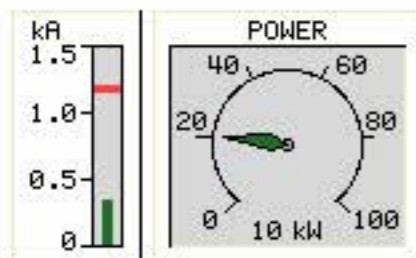


U





Shaft Generator



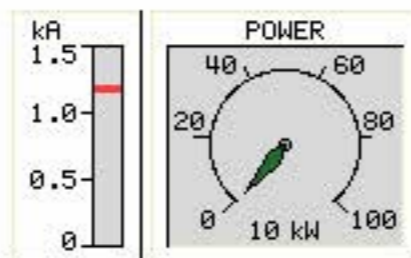
DECR COM ADJUS SPEED SYNC LOAD UN-LOAD INCR COM



CLUTCH OUT	RUN	CLUTCH IN
DIS-CONN	IN	CONN
READY	PTI	AUTO
Prior 1	Prior 2	Prior 3

073

Diesel Generator 1



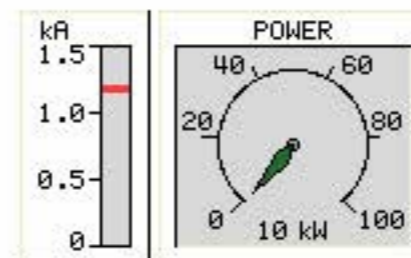
DECR COM ADJUS SPEED SYNC LOAD UN-LOAD INCR COM



STOP	RUN	START
DIS-CONN	IN	CONN
READY		AUTO
Prior 1	Prior 2	Prior 3

071

Diesel Generator 2



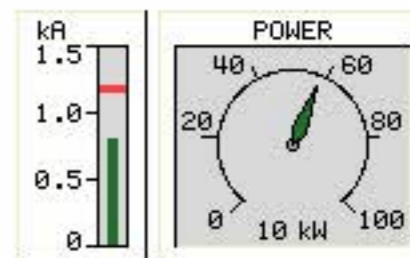
DECR COM ADJUS SPEED SYNC LOAD UN-LOAD INCR COM



STOP	RUN	START
DIS-CONN	IN	CONN
READY		AUTO
Prior 1	Prior 2	Prior 3

072

Turbo Generator



DECR COM ADJUS SPEED SYNC LOAD UN-LOAD INCR COM



	RUN	
DIS-CONN	IN	CONN
READY		AUTO

086

Control Mode

Alarms

Equal Load	Optim Load	Cyclic Load	Freq Contr
------------	------------	-------------	------------

Non Ess Trip	High Power	Gen S/S Req
--------------	------------	-------------

Power Chief Generator Control



Sea Water Pumps 001

No 1 START No 2 START AUTO

ME Aux Blowers 020

No 1 START No 2 START AUTO

Start Air Compr. 1 060

START AUTO

Low Temp FW Pumps 010

No 1 START No 2 START AUTO

Thermal Oil Pumps 065

No 1 START No 2 START AUTO

Start Air Compr. 2 060

START AUTO

High Temp FW Pumps 010

No 1 START No 2 START AUTO

Steering Gear Pumps 058

No 1 START No 2 START AUTO

Service Air Compr. 060

START AUTO

FO Booster Pumps 002

No 1 START No 2 START AUTO

Main LO Pumps 012

No 1 START No 2 START AUTO

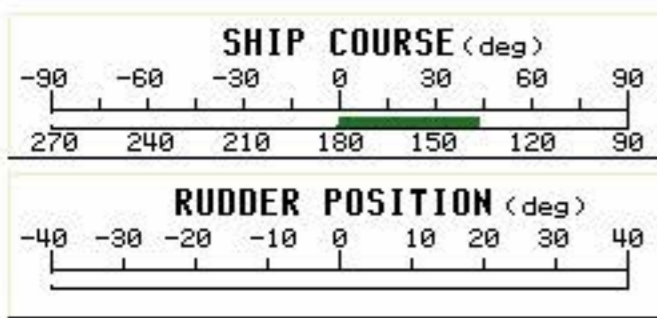
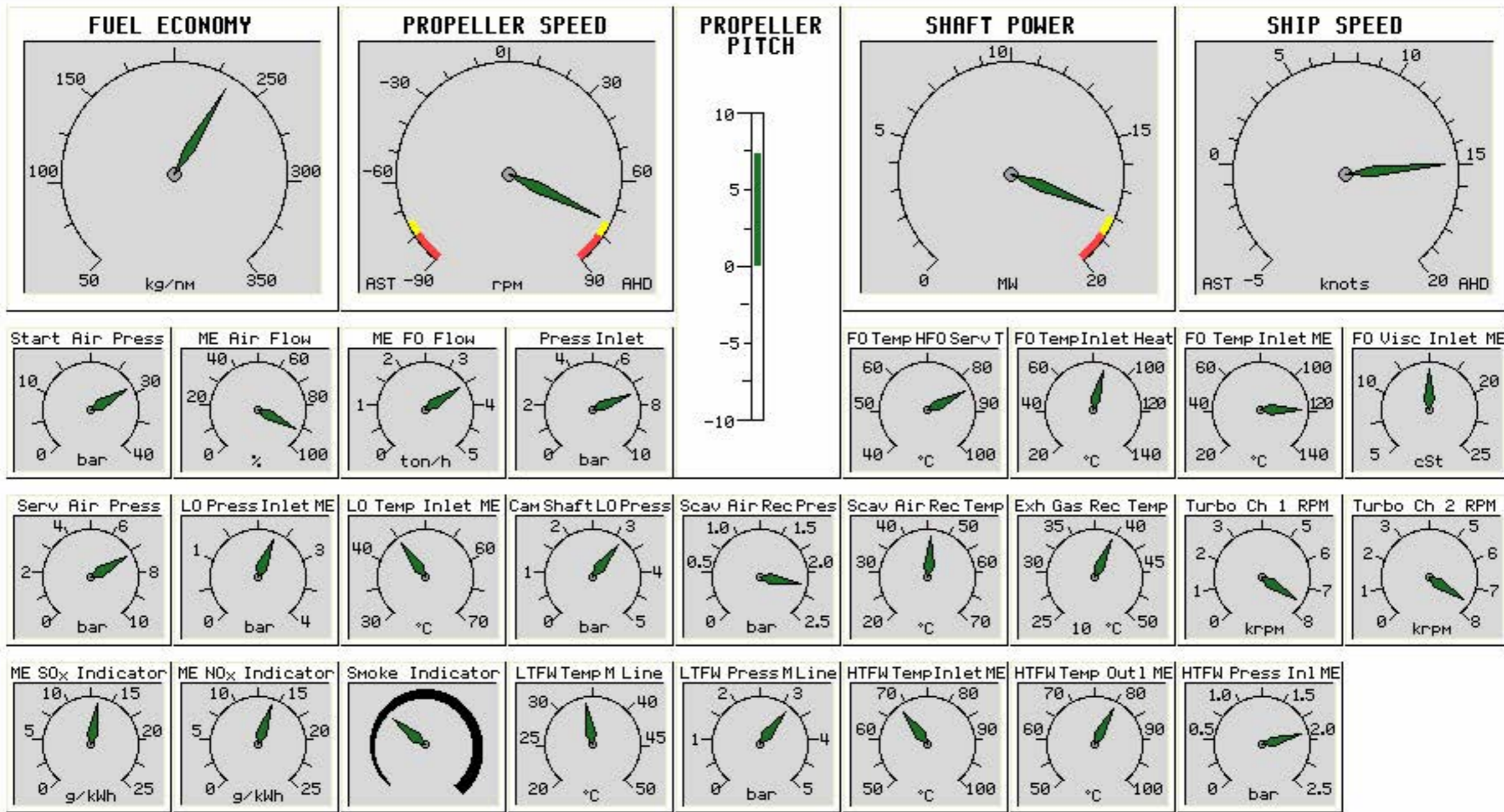
FO Supply Pumps 002

No 1 START No 2 START AUTO

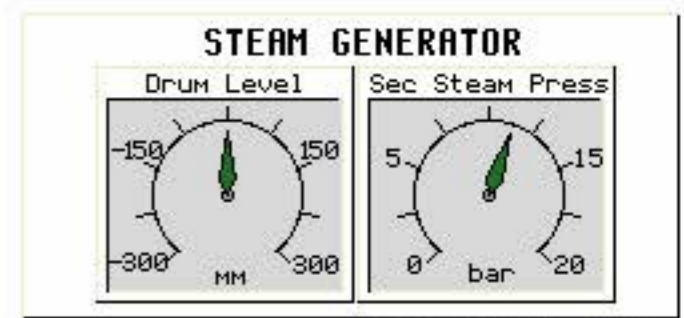
Camshaft LO Pumps 012

No 1 START No 2 START AUTO

Power Chief
Pump/Compressor
Control



Auto Chief
Indicator Panel



00:00:00
Freeze

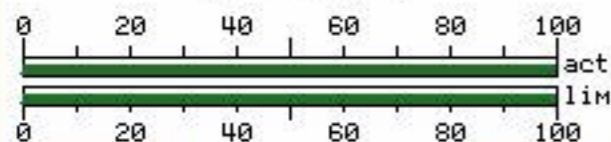
Picture
MD 104

Auto Chief – Main Engine Control

Alarm
Group



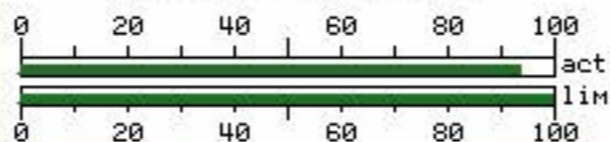
RPM Command



Decr

Incr

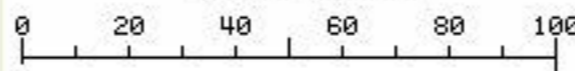
Fuel Link Command



Scav
Air
Limit

Torque
Limit

Fixed Speed



Setpoint: ▶ 0.0

Finish
with
Engine

ECR
Stand
By

At
Sea

Responsibility Transfer

Local

Engine
Ctr. R

Bridge

ME rpm Actual **73.9** ME rpm Command **74.0**

Running hour

00002.5

Fixed
Pitch

Combi

Econ

Fixed
Speed

Emerg
Stop

Direct
F Link

Lock
F Link

AST



COMMAND

AHD



STOP SIGNAL

START SIGNAL

Shut
Down

Slow
Down

Fail

LO Press

Th Bearing

Cyl Cool T

Overspeed

Turn G In

LO Press

Th Bearing

Pist Cool F

Scav Air T

Misc

Start F

Rev Fail

Brake F

Start Air

Ctr Air

Full

Half

Slow

Dead
Slow

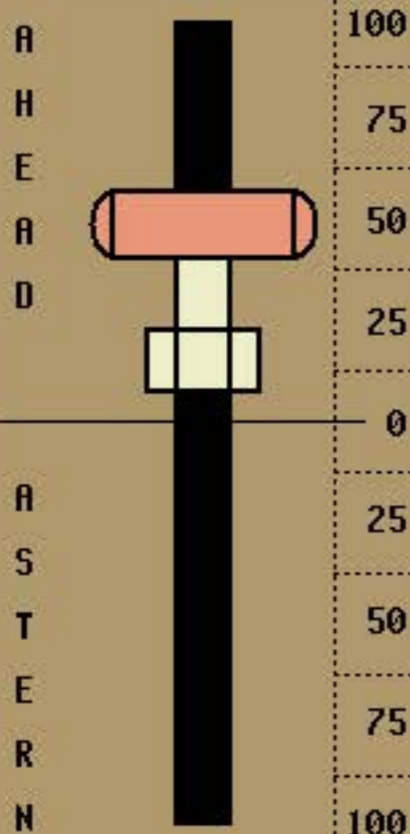
Stop

Dead
Slow

Slow

Half

Full



Lever
Mis-
match

Control
lever:
▶ 50.0

Combi
Start
Stop

Slow
Turn

Wrong
Way

Horn
Reset

Auto Chief Main Engine Control

SHD
Pre-
warn.

SLD
Pre-
warn.

Therm.
Load
Progr.

Load
Limits

SHD
Over-
ride

SLD
Over-
ride

Progr.
Over-
ride

Limits
Over-
ride

00:00:00
Freeze

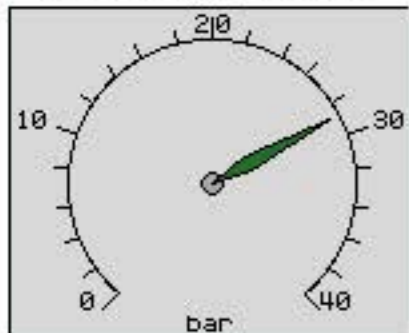
Picture
MD 110

Main Engine – Bridge Control

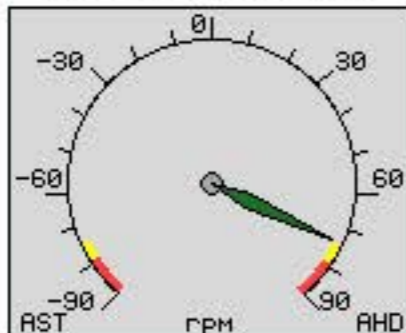
Alarm
Group



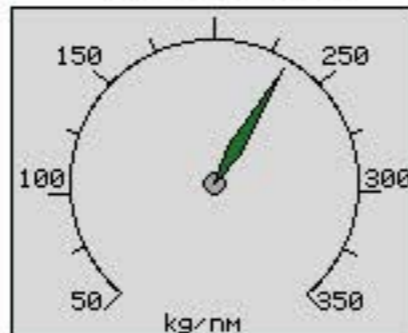
START AIR PRESS



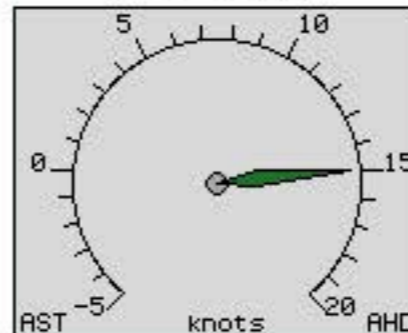
PROPELLER SPEED



FUEL ECONOMY



SHIP SPEED



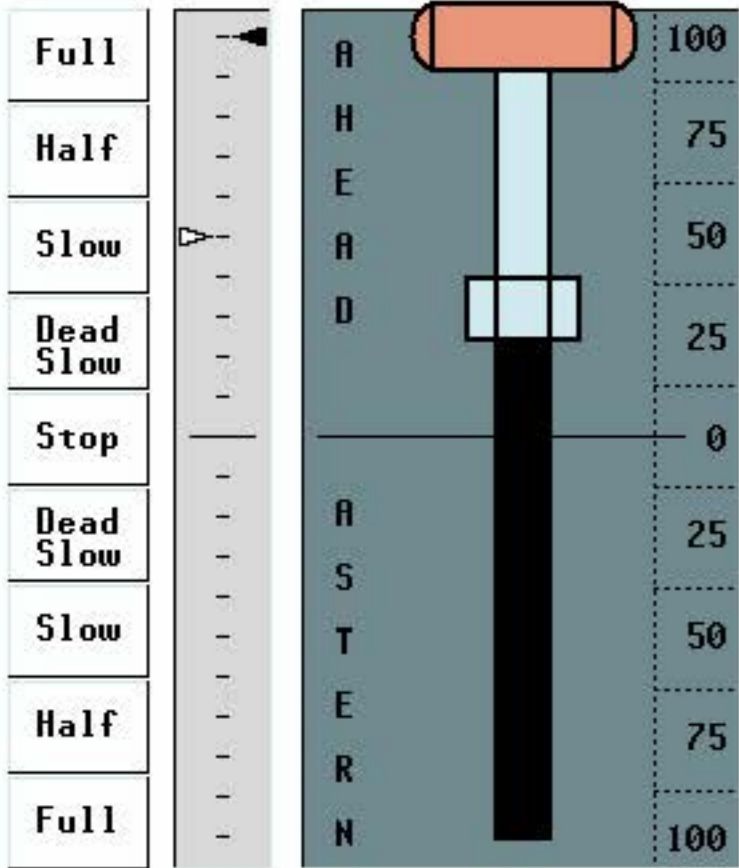
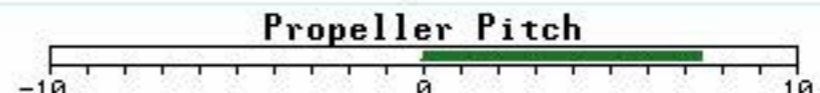
Finish with Engine ECR Stand By At Sea

Responsibility Transfer

Local Engine Ctr. R Bridge Loss of Response
RESET

ME rpm Actual 73.9 Command 74.0

Fixed Speed Setpoint: 0.0



Control lever: 100.0

Emerg Stop Fixed Pitch Combi Econ Fixed Speed

Shut Down Slow Down Fail

AST COMMAND AHD
CAMSHAFT POS
STOP SIGNAL
START SIGNAL

- LO Press, Th Bearing, Cyl Cool T, Overspeed, Turn G In, LO Press, Pist Cool F, Scav Air T, Misc, Start F, Rev Fail, Brake F, Start Air, Ctr Air

Auto Chief
Main Engine
Bridge Control

NavSim Connection

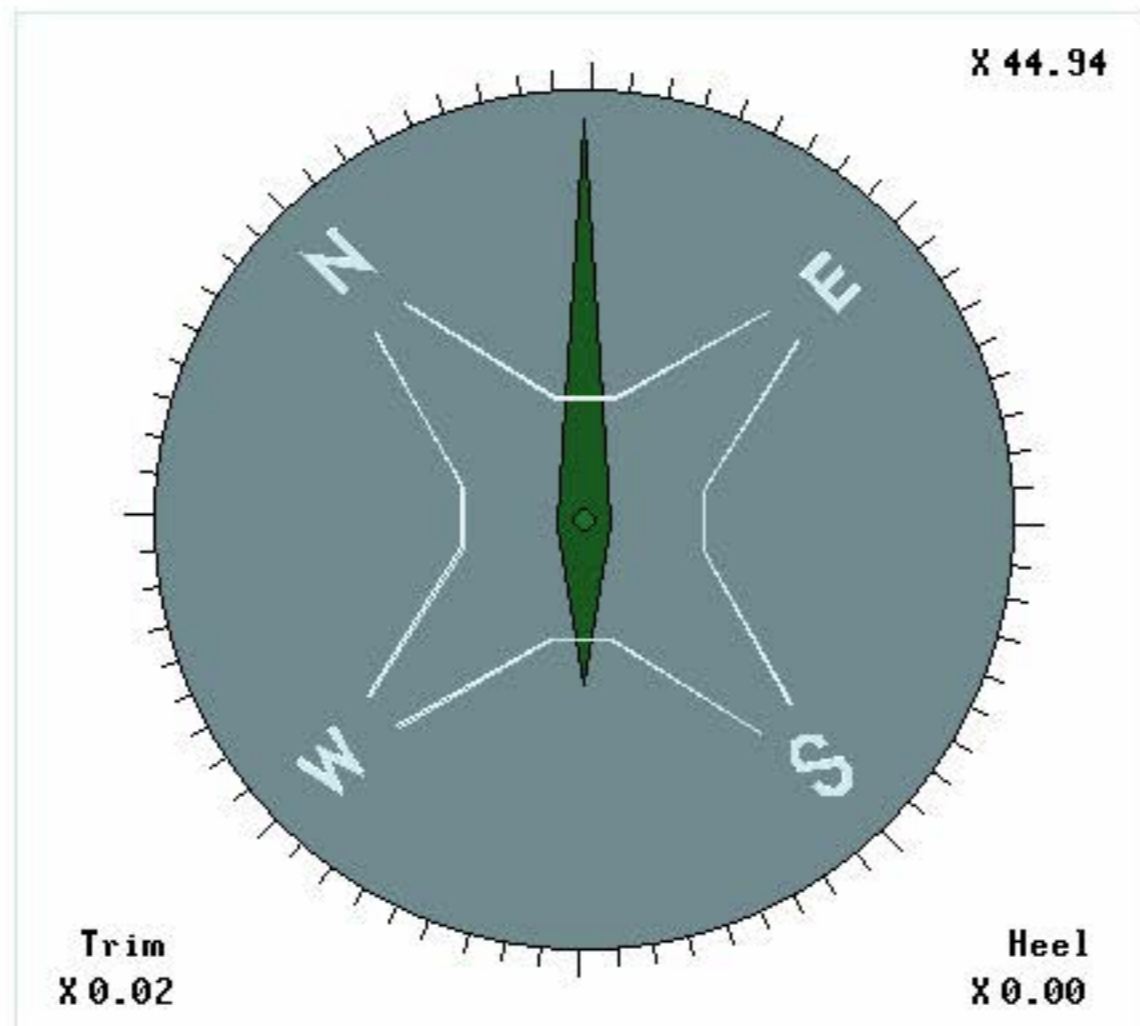
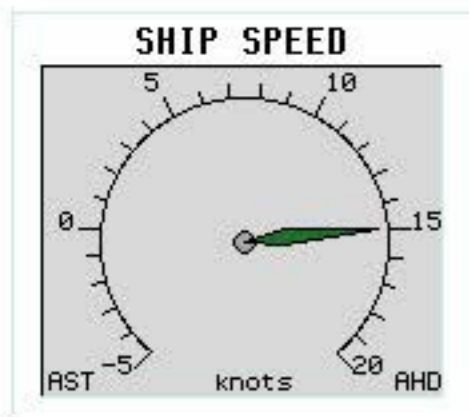
SHD Pre-warn., SLD Pre-warn., Therm. Load Progr., Load Limits, SHD Over-ride, SLD Over-ride, Progr. Over-ride, Limits Over-ride

00:00:00
Freeze

Picture
MD 111

Ship Course Control

Alarm
Group



Steering Gear Pumps

No 1 START No 2 START AUTO

Ambient Air Temp	T 28.00 °C
Wind Force	N 0.00 m/sec
Wind Direction	X 0.00 dgr

AUTOPILOT

SHIP COURSE

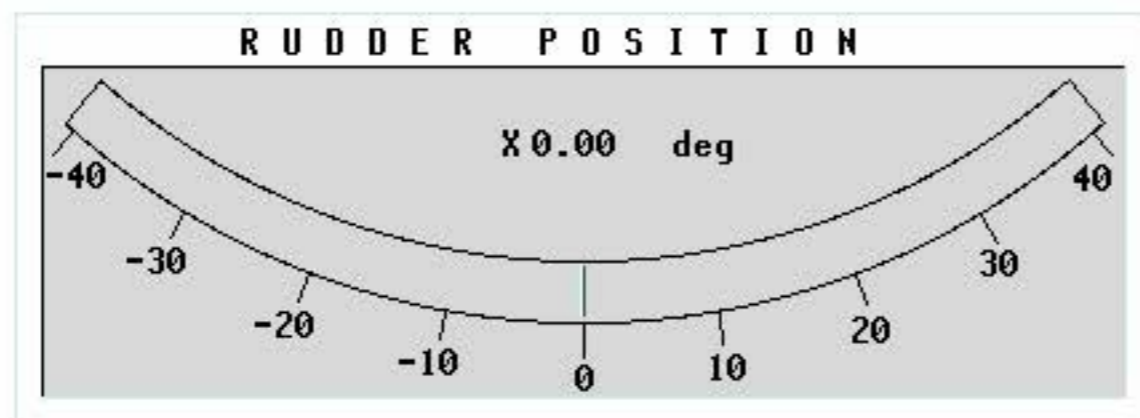
ON Set Point: 45.0
MAN OFF

BOW THRUSTER [kW]

0 100 200 300 400 500 START STOP

PROPELLER PITCH

-10 0 10 Set Point: 0.0

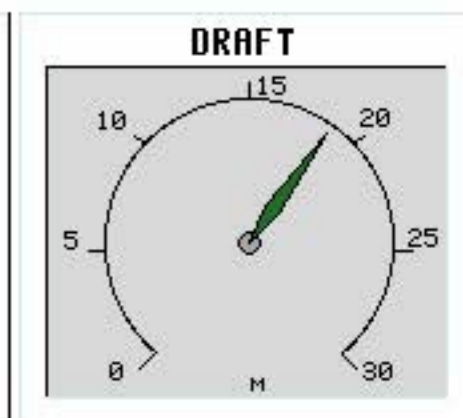
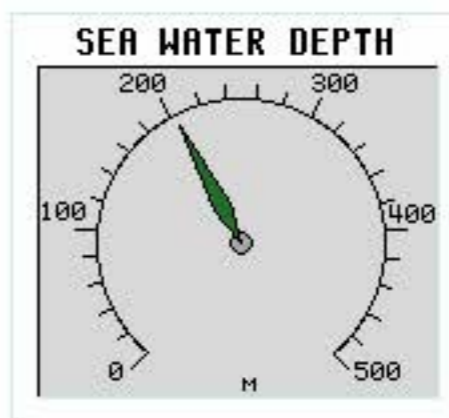


Fire Pumps

No 1 START No 2 START EMERG START

RUDDER POSITION

Set Point: 0.0



EMERGENCY RUDDER CONTROL

PORT STBD



SHIP LOAD

Deadwth.	M183.62	kton
Trim	X0.02	M
Heel	X0.00	M
Draft	X18.83	M

BUNKER TANKS

Aft	M898.20	ton
Port	M399.20	ton
Stbd	M399.20	ton
Fore	M499.00	ton

SW TANKS

FPT	M1.00	kton
WT3P	M2.00	kton
WT3S	M2.00	kton

CARGO WING TANKS

WT1P	M10.00	kton
WT2P	M9.00	kton
WT4P	M13.00	kton
WT5P	M9.00	kton
WT6P	M1.00	kton

TOTAL LOAD

Cargo	M176.00	kton
HFO	M2412.7	ton
D0	M66.11	ton
SW	M5.00	kton

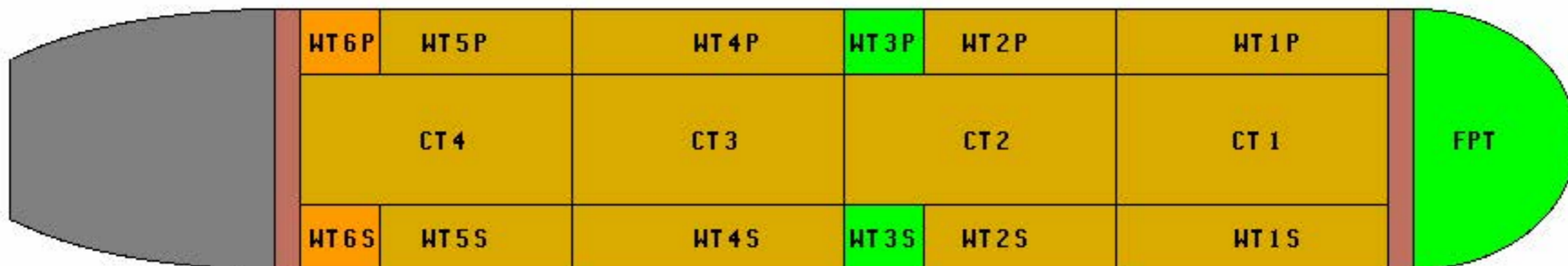
STORAGE TANKS

D0	M31.39	ton
L0	M60.00	ton
FW	M79.13	ton

CARGO CENTER TANKS

CT1	M20.00	kton
CT2	M24.00	kton
CT3	M24.00	kton
CT4	M24.00	kton

WT1S	M10.00	kton
WT2S	M9.00	kton
WT4S	M13.00	kton
WT5S	M9.00	kton
WT6S	M1.00	kton





EMERGENCY SHUT OFF

- SHUT OFF** ME/DG
- SHUT OFF** DO/FO/LO PUMPS
- SHUT OFF** TANK SHUT OFF
- SHUT OFF** VENTILATION

FIRE ALARM



CO₂ ALARM



**ACTIVATE CO2 ALARM:
OPEN THE DOOR**

**RELEASE CO2:
PRESS BUTTON
INSIDE THE BOX**

OPEN DOOR

00:00:00
Freeze

Picture
MD 120

Cylinder Indication Press/Angle

Alarm
Group



GENERAL

SPEED : 74.0 RPM
INDEX : 94.2 %
MIP : 16.9 BAR
IKW : 3871. KW

COMBUSTION

TIGN : 0.6 DGR
PMAx : 132.4 BAR
TMAx : 12.2 DGR
PCOMPR : 112.3 BAR

INJECTION

PINJO : 420.0 BAR
PINJM : 732.4 BAR
TINJO : -4.2 DGR
LINJ : 17.0 DGR

GENERAL

SPEED : 0.0 RPM
INDEX : 0.0 %
MIP : 0.0 BAR
IKW : 0.0 KW

COMBUSTION

TIGN : 0.0 DGR
PMAx : 0.0 BAR
TMAx : 0.0 DGR
PCOMPR : 0.0 BAR

INJECTION

PINJO : 0.0 BAR
PINJM : 0.0 BAR
TINJO : 0.0 DGR
LINJ : 0.0 DGR

GENERAL

SPEED : 0.0 RPM
INDEX : 0.0 %
MIP : 0.0 BAR
IKW : 0.0 KW

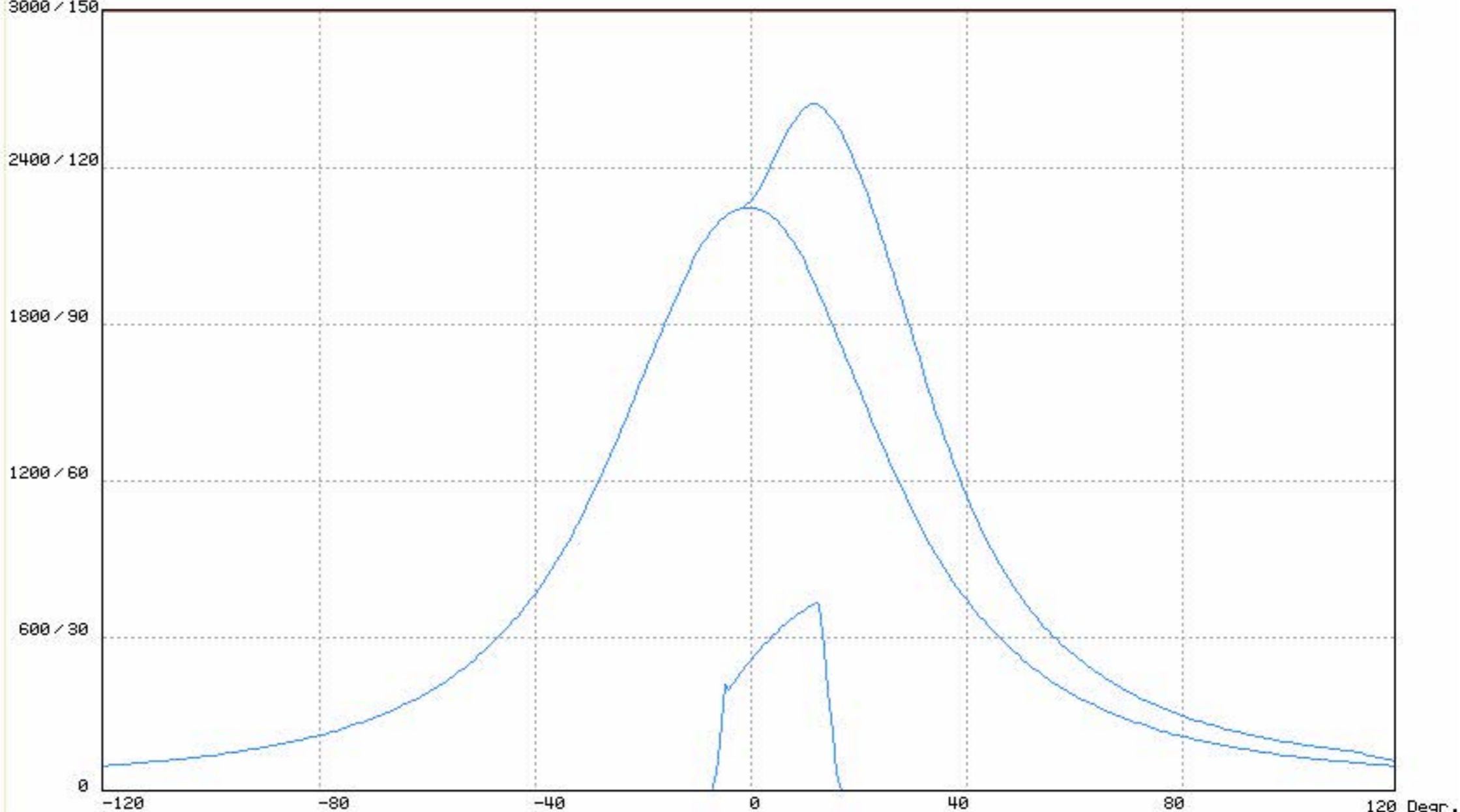
COMBUSTION

TIGN : 0.0 DGR
PMAx : 0.0 BAR
TMAx : 0.0 DGR
PCOMPR : 0.0 BAR

INJECTION

PINJO : 0.0 BAR
PINJM : 0.0 BAR
TINJO : 0.0 DGR
LINJ : 0.0 DGR

BarA / BarA
3000 / 150



INDICATE <Cyl. 1 - 5>

I 1	full ahead
I 2	
I 3	
I 4	
I 5	

SELECT CURVE

Cyl.1	I 1	full ahead
Cyl.2	I 2	
Cyl.3	I 3	
Cyl.4	I 4	
Cyl.5	I 5	

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

00:00:00
Freeze

Picture
MD 121

Cylinder Indication Press/Vol

Alarm
Group



GENERAL

SPEED : 74.0 RPM
INDEX : 94.2 %
MIP : 16.9 BAR
IKW : 3871. KW

COMBUSTION

TIGN : 0.6 DGR
PMAx : 132.4 BAR
TMAX : 12.2 DGR
PCOMPR : 112.3 BAR

INJECTION

PINJO : 420.0 BAR
PINJM : 732.4 BAR
TINJO : -4.2 DGR
LINJ : 17.0 DGR

GENERAL

SPEED : 0.0 RPM
INDEX : 0.0 %
MIP : 0.0 BAR
IKW : 0.0 KW

COMBUSTION

TIGN : 0.0 DGR
PMAx : 0.0 BAR
TMAX : 0.0 DGR
PCOMPR : 0.0 BAR

INJECTION

PINJO : 0.0 BAR
PINJM : 0.0 BAR
TINJO : 0.0 DGR
LINJ : 0.0 DGR

GENERAL

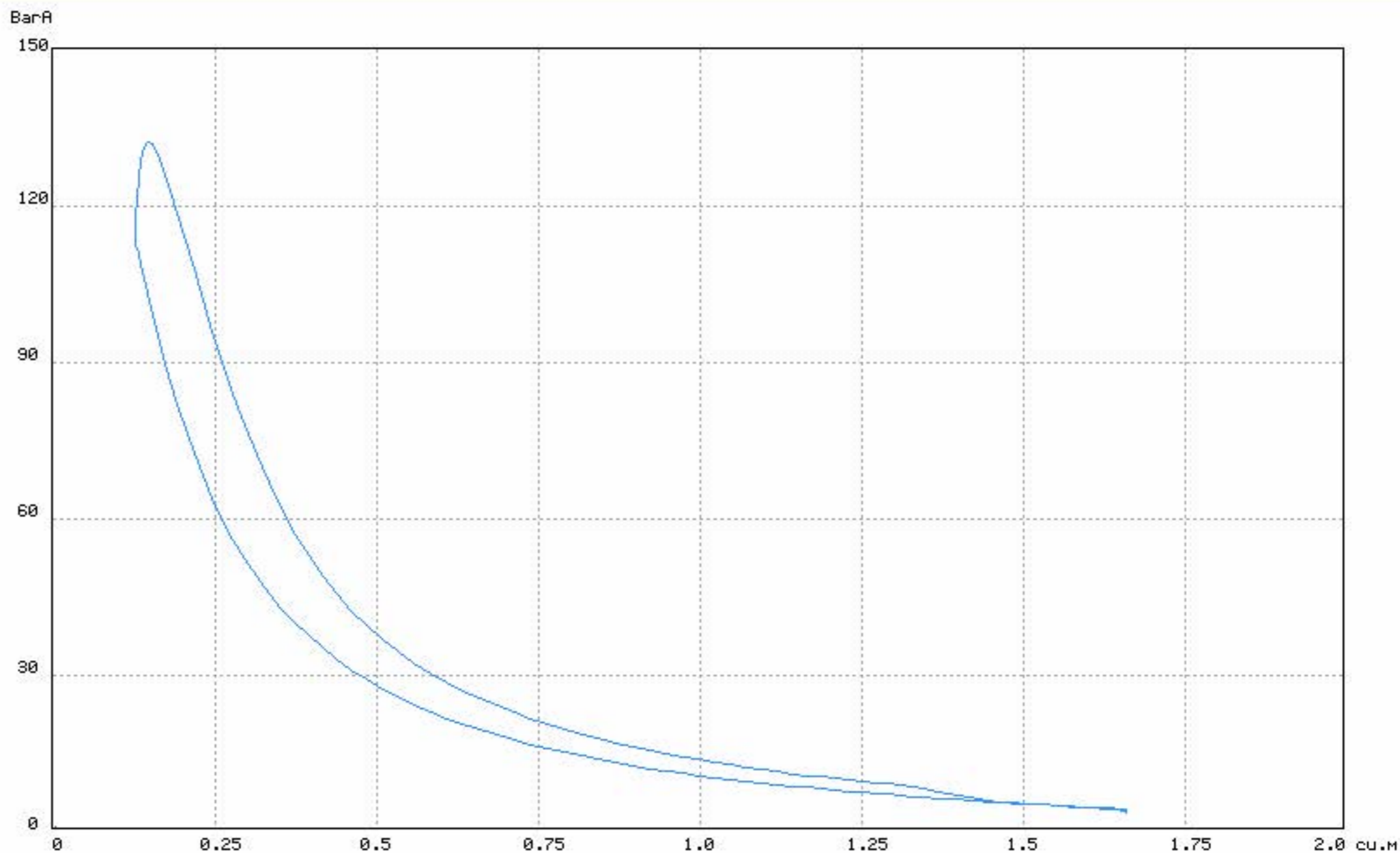
SPEED : 0.0 RPM
INDEX : 0.0 %
MIP : 0.0 BAR
IKW : 0.0 KW

COMBUSTION

TIGN : 0.0 DGR
PMAx : 0.0 BAR
TMAX : 0.0 DGR
PCOMPR : 0.0 BAR

INJECTION

PINJO : 0.0 BAR
PINJM : 0.0 BAR
TINJO : 0.0 DGR
LINJ : 0.0 DGR



INDICATE (Cyl. 1 - 5)

I 1	full ahead
I 2	
I 3	
I 4	
I 5	

SELECT CURVE

Cyl.1	I 1	full ahead
Cyl.2	I 2	
Cyl.3	I 3	
Cyl.4	I 4	
Cyl.5	I 5	

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

00:00:00
Freeze

Picture
MD 122

Weak Spring Diagram

Alarm
Group



GENERAL

SPEED : 74.0 RPM
 INDEX : 94.2 %
 MIP : 16.9 BAR
 IKW : 3871. KW
 SCAV.P : 2.15 BAR
 EXH.P : 1.76 BAR

COMBUSTION

TIGN : 0.6 DGR
 PMAX : 132.4 BAR
 TMAX : 12.2 DGR
 PCOMPR : 112.3 BAR

GENERAL

SPEED : 0.0 RPM
 INDEX : 0.0 %
 MIP : 0.0 BAR
 IKW : 0.0 KW
 SCAV.P : 0.00 BAR
 EXH.P : 0.00 BAR

COMBUSTION

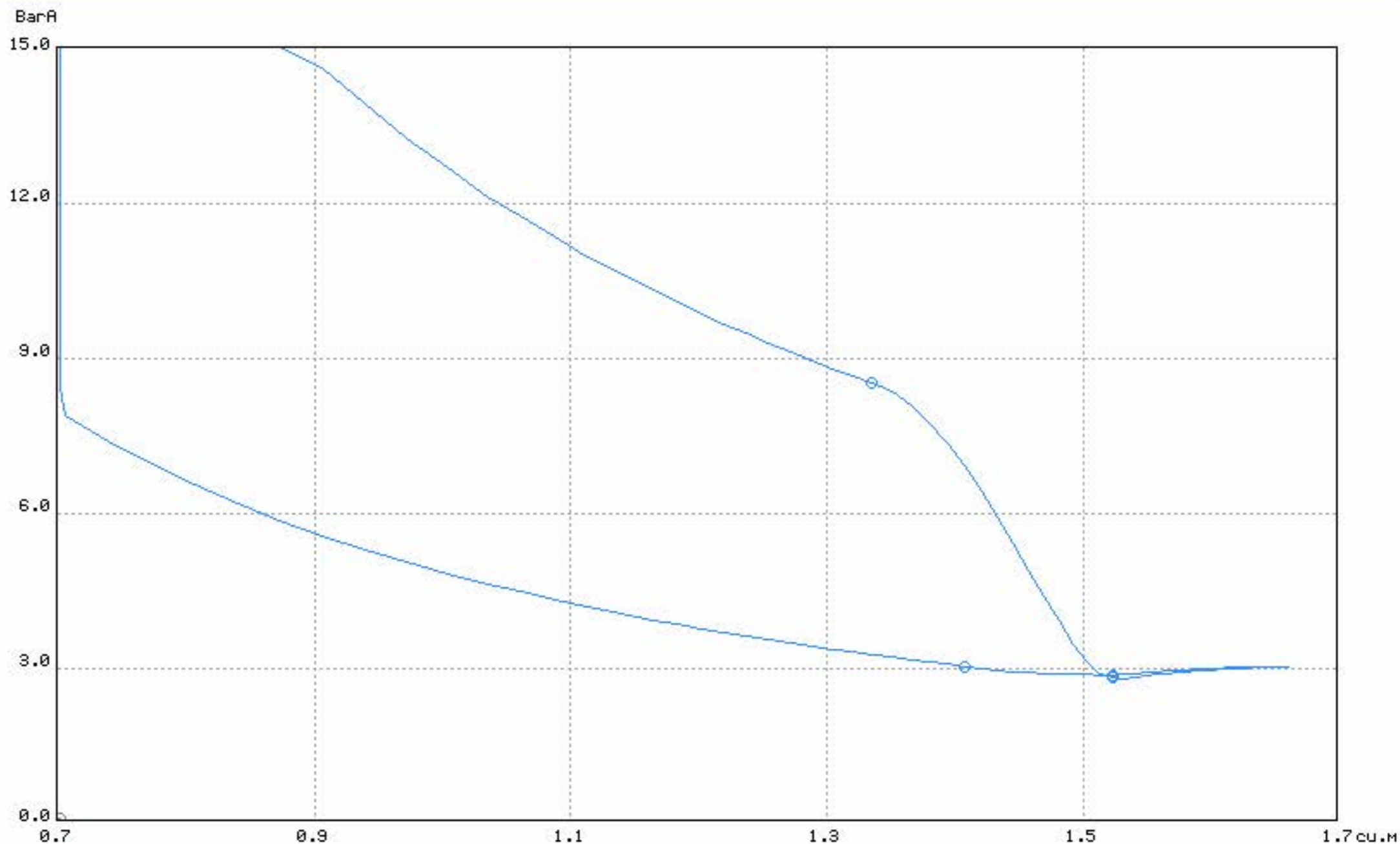
TIGN : 0.0 DGR
 PMAX : 0.0 BAR
 TMAX : 0.0 DGR
 PCOMPR : 0.0 BAR

GENERAL

SPEED : 0.0 RPM
 INDEX : 0.0 %
 MIP : 0.0 BAR
 IKW : 0.0 KW
 SCAV.P : 0.00 BAR
 EXH.P : 0.00 BAR

COMBUSTION

TIGN : 0.0 DGR
 PMAX : 0.0 BAR
 TMAX : 0.0 DGR
 PCOMPR : 0.0 BAR



INDICATE (Cyl. 1 - 5)

I 1	full ahead
I 2	
I 3	
I 4	
I 5	

SELECT CURVE

Cyl.1	I 1	full ahead
Cyl.2	I 2	
Cyl.3	I 3	
Cyl.4	I 4	
Cyl.5	I 5	

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

00:00:00
Freeze

Picture
MD 123

Cyl. Indication Delta-Press/Angle

Alarm
Group



GENERAL

SPEED : 74.0 RPM
INDEX : 94.2 %
MIP : 16.9 BAR
IKW : 3871. KW

COMBUSTION

TIGN : 0.6 DGR
PMAx : 132.4 BAR
TMAX : 12.2 DGR
PCOMPR : 112.3 BAR

INJECTION

PINJO : 420.0 BAR
PINJM : 732.4 BAR
TINJO : -4.2 DGR
LINJ : 17.0 DGR

GENERAL

SPEED : 0.0 RPM
INDEX : 0.0 %
MIP : 0.0 BAR
IKW : 0.0 KW

COMBUSTION

TIGN : 0.0 DGR
PMAx : 0.0 BAR
TMAX : 0.0 DGR
PCOMPR : 0.0 BAR

INJECTION

PINJO : 0.0 BAR
PINJM : 0.0 BAR
TINJO : 0.0 DGR
LINJ : 0.0 DGR

GENERAL

SPEED : 0.0 RPM
INDEX : 0.0 %
MIP : 0.0 BAR
IKW : 0.0 KW

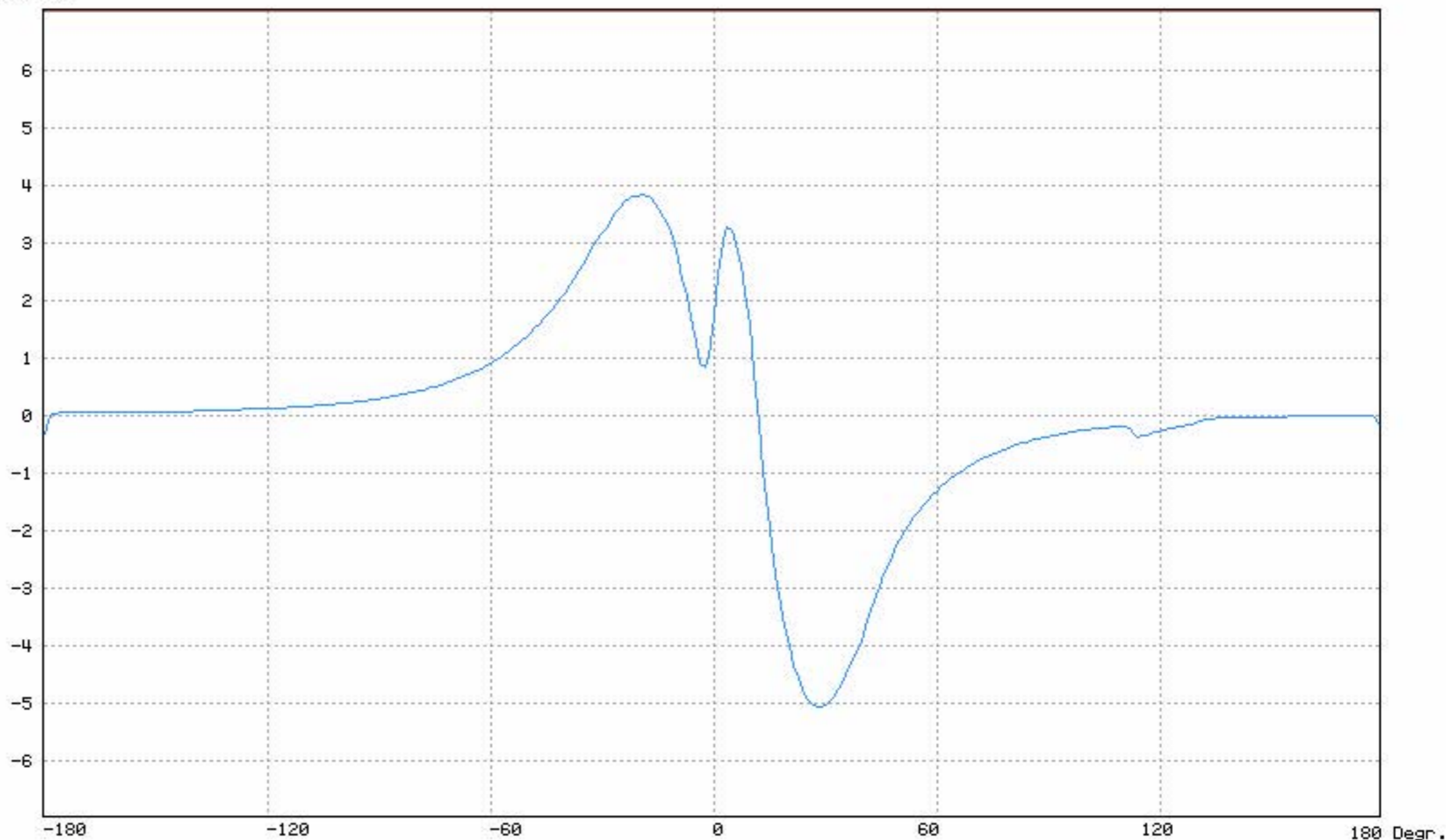
COMBUSTION

TIGN : 0.0 DGR
PMAx : 0.0 BAR
TMAX : 0.0 DGR
PCOMPR : 0.0 BAR

INJECTION

PINJO : 0.0 BAR
PINJM : 0.0 BAR
TINJO : 0.0 DGR
LINJ : 0.0 DGR

BarA / DGR



INDICATE <Cyl. 1 - 5>

I 1	full ahead
I 2	
I 3	
I 4	
I 5	

SELECT CURVE

Cyl.1	I 1	full ahead
Cyl.2	I 2	
Cyl.3	I 3	
Cyl.4	I 4	
Cyl.5	I 5	

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

SELECT CURVE

Cyl.1	I 1
Cyl.2	I 2
Cyl.3	I 3
Cyl.4	I 4
Cyl.5	I 5

00:00:00
Freeze

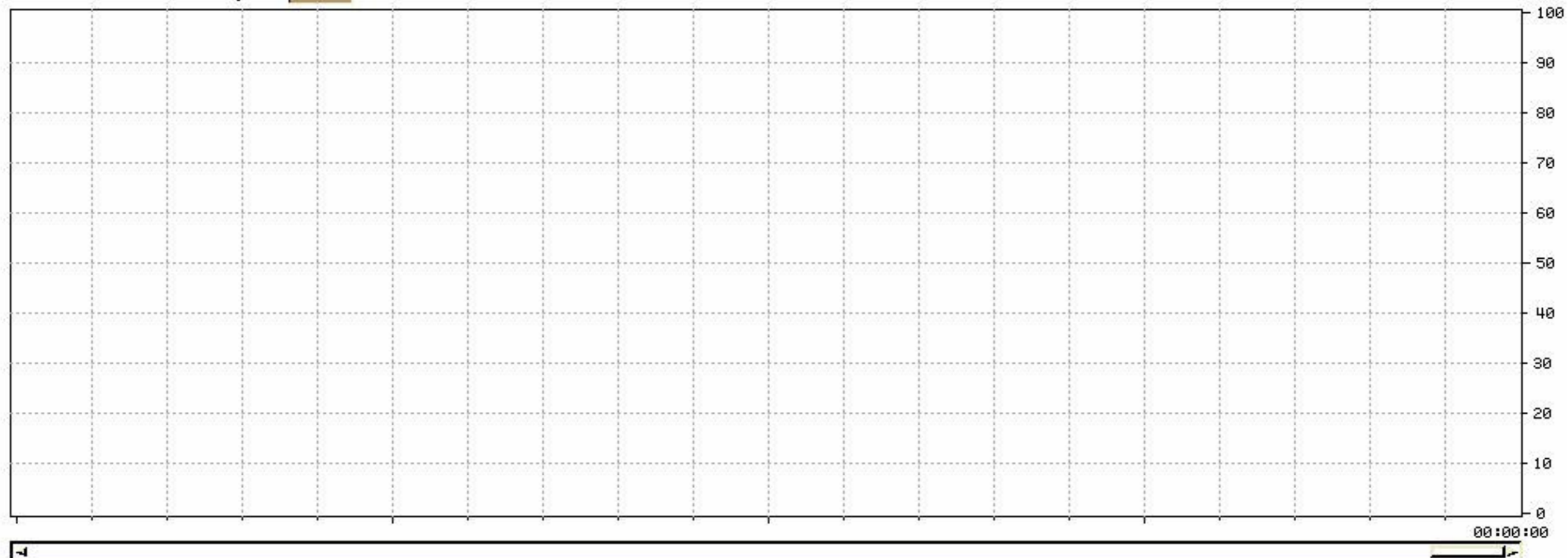
Picture
MD 130

Pen Recorder

Alarm
Group



Plot Window Time Span: min.



Start Plotting	Tagname	Value	Unit	Description	Low	High
<input checked="" type="checkbox"/> Channel 1		0.00			0.00	0.00
<input checked="" type="checkbox"/> Channel 2		0.00			0.00	0.00
<input checked="" type="checkbox"/> Channel 3		0.00			0.00	0.00
<input checked="" type="checkbox"/> Channel 4		0.00			0.00	0.00
<input checked="" type="checkbox"/> Channel 5		0.00			0.00	0.00
<input checked="" type="checkbox"/> Channel 6		0.00			0.00	0.00

Pen Recorder Status

- Pen Recorder Interface
- Pen Recorder Running

Pen Recorder Warnings

- Paper Out

Pen Recorder Errors

- Interface Error

Pen Recorder Data

Paper Speed.. : mm/hour