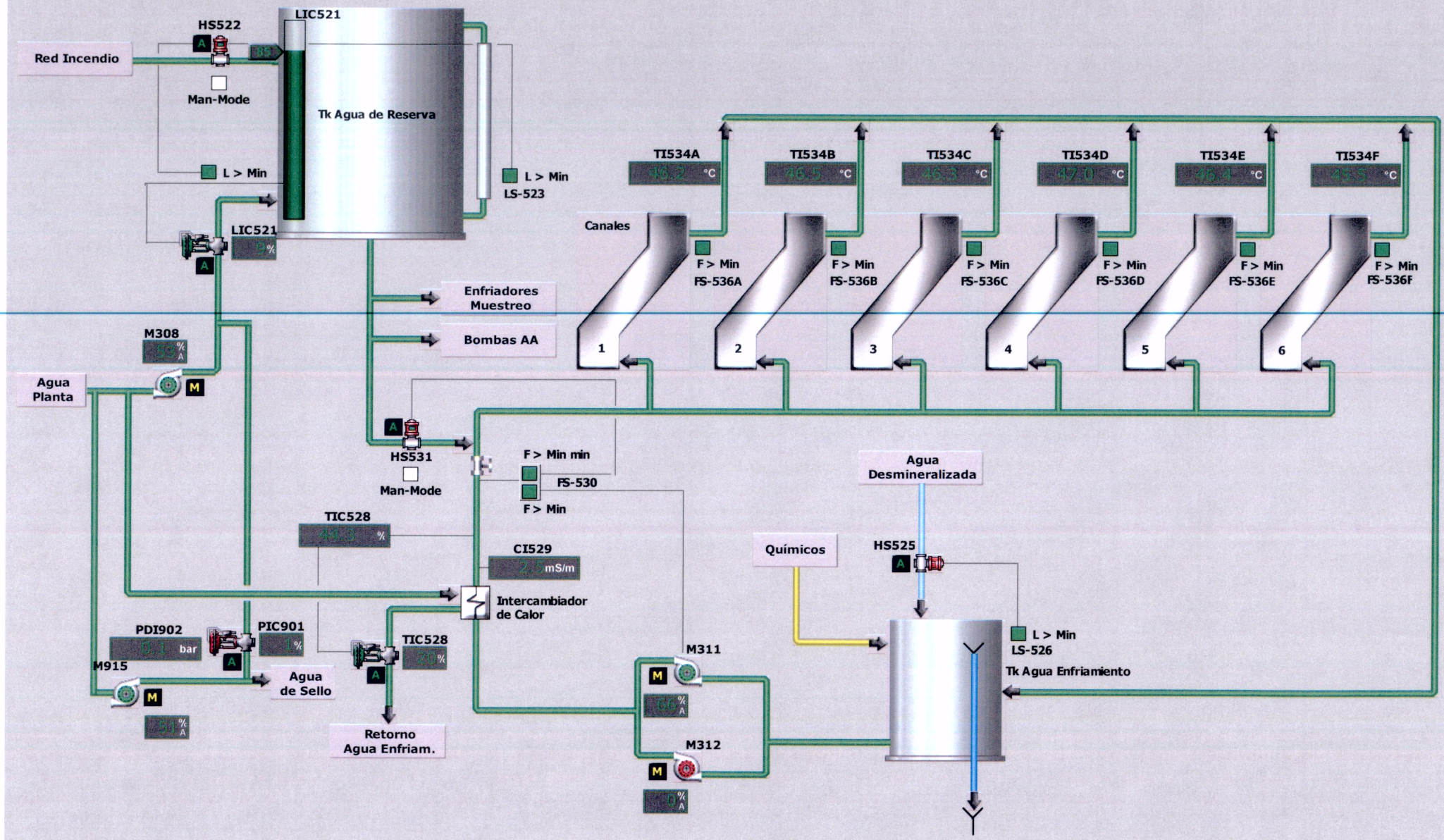
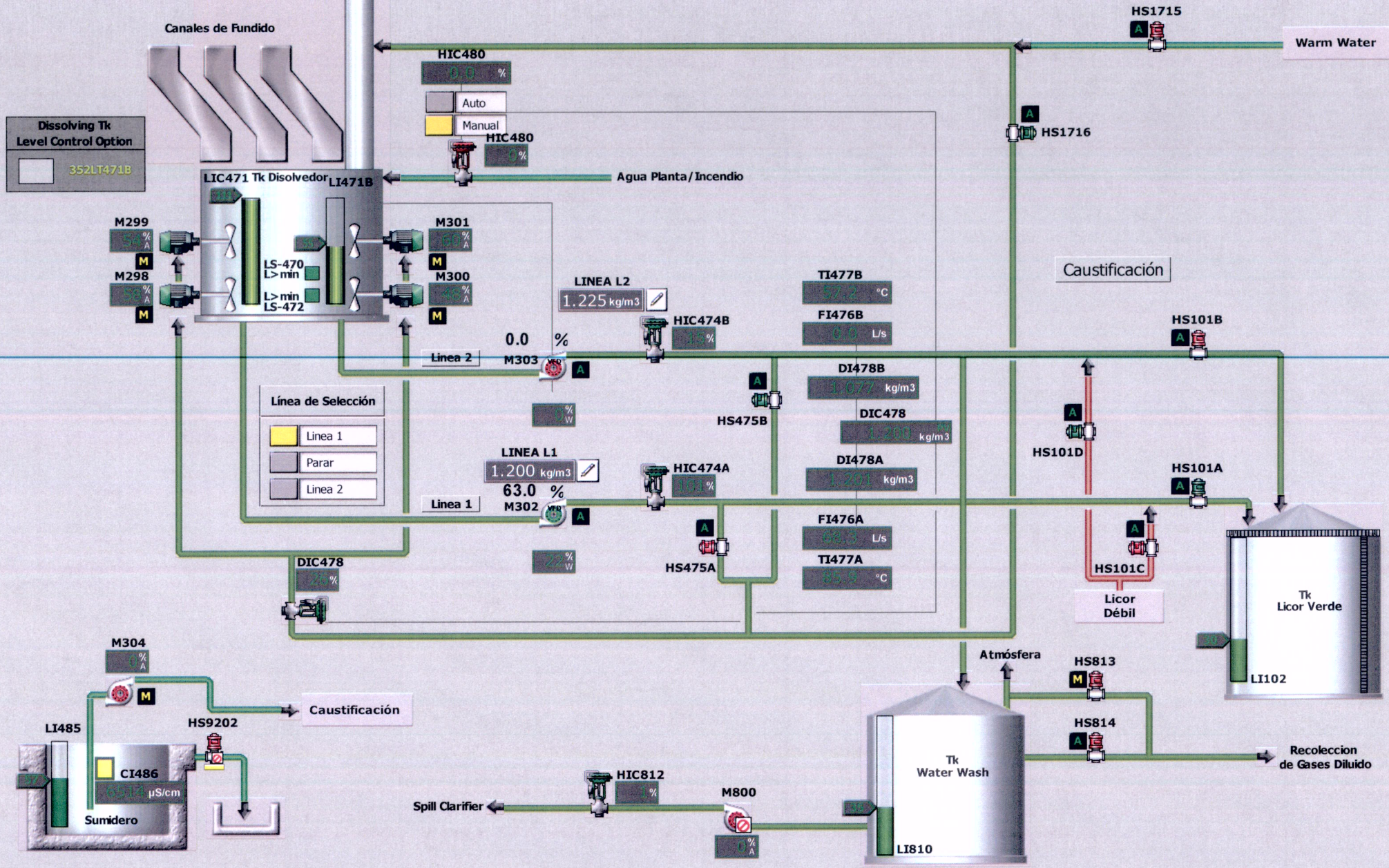


352 - Caldera Recuperadora - Canales de Fundido

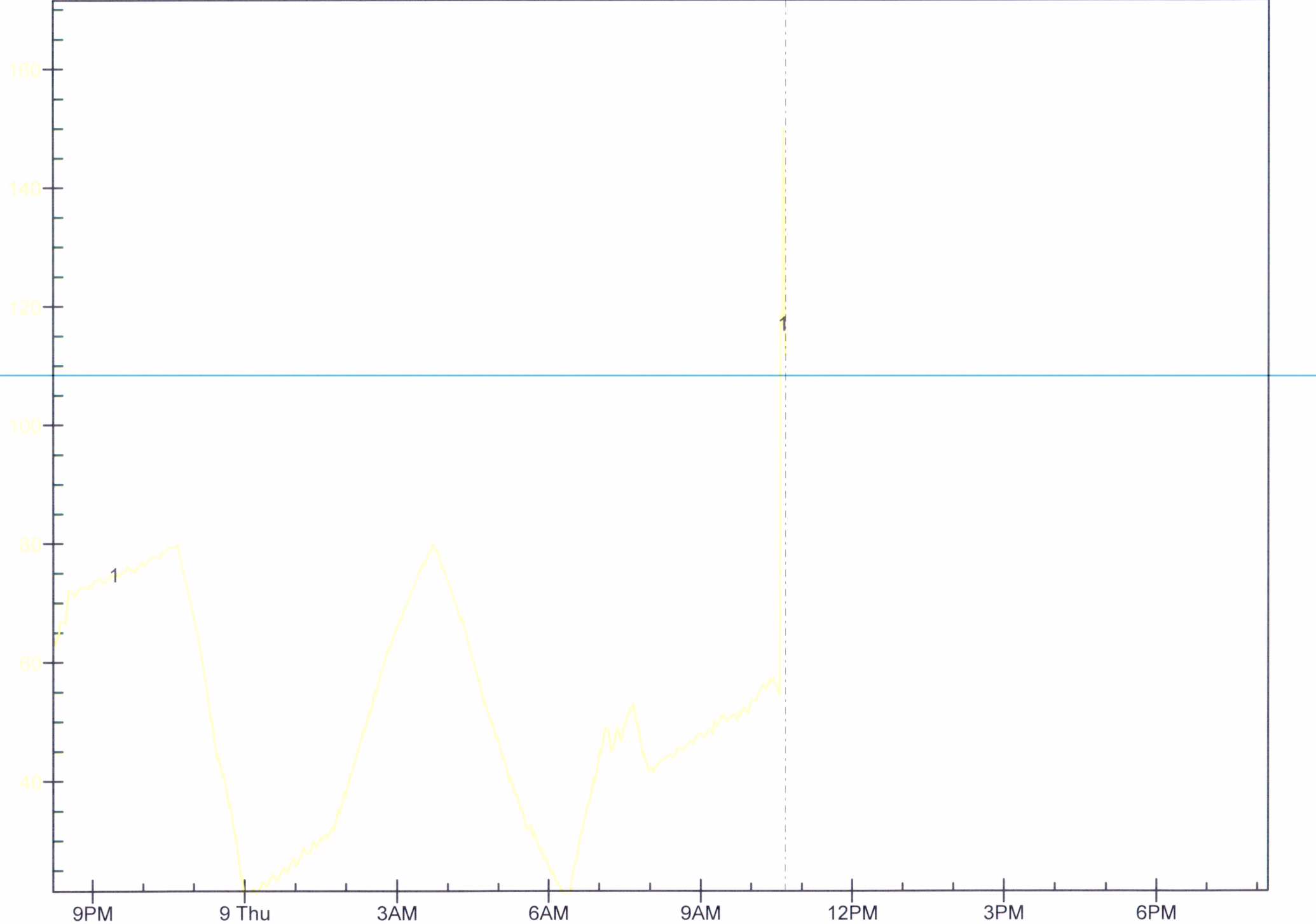


352 - Caldera Recuperadora - Licor Verde



LV en Tk Disolvedor 08-feb-17 to 08-feb-17

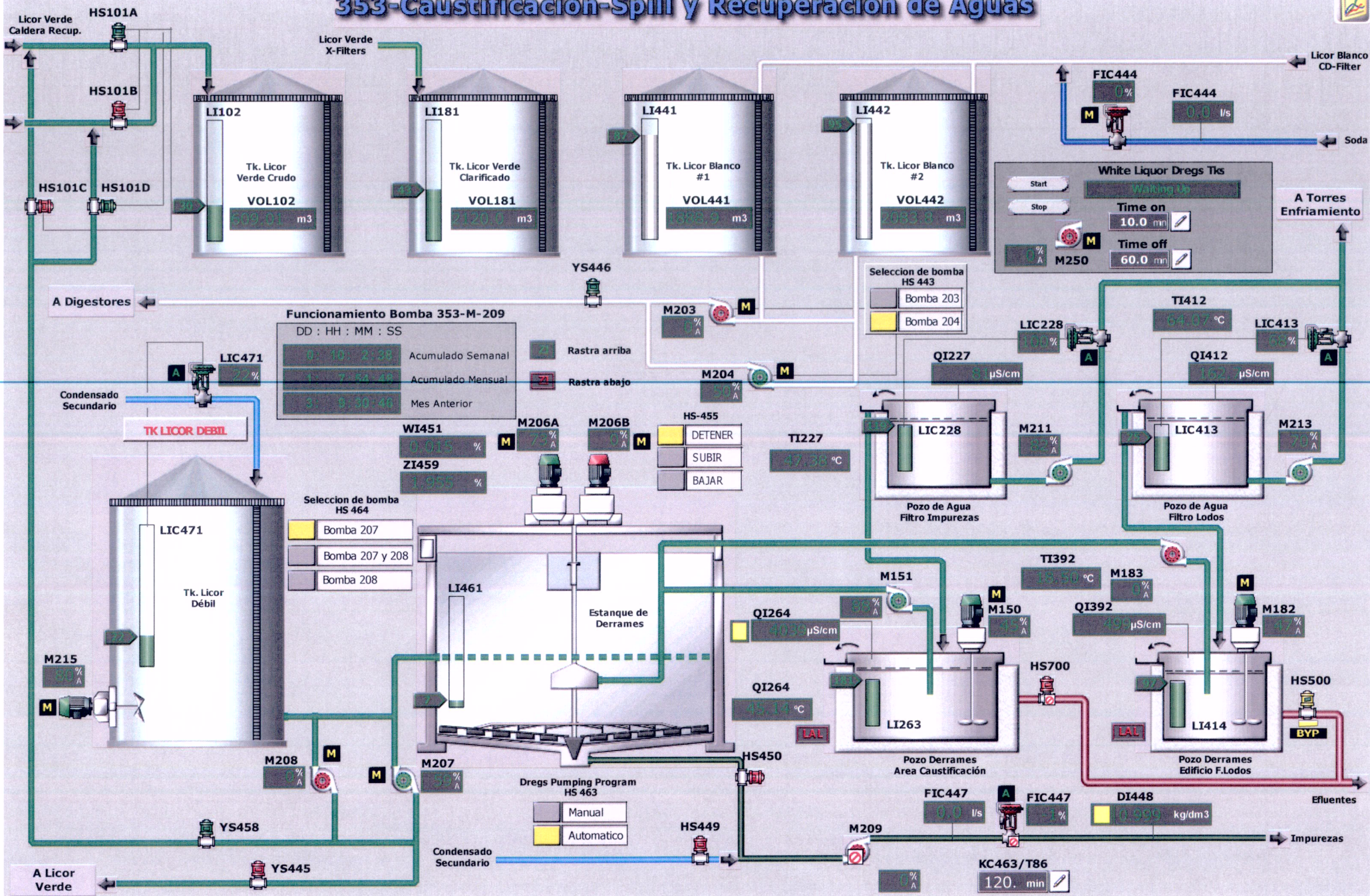
Fecha y Hora	Número	Nombre	Turno	Efecti...	Activo...	Total [...]	Vol. Sól...	Densida...	Efectivo ...	Activo (g...	Total (g/...	Soda (g/...	Na2S (g/...	Sulfidez ...	Sól. Sedi...
08-feb-2017 0...	201702080200	V Huerta	23 - 07	4.73	8.90	23.57		1.191	37.8	71.2	188.6	4.4	66.8	35.4	
08-feb-2017 0...	201702080600	V Huerta	23 - 07	4.50	8.15	21.43		1.171	36.0	65.2	171.4	6.8	58.4	34.1	
08-feb-2017 1...	201702081000	L Neira	07 - 15	4.73	8.57	22.57		1.177	37.8	68.6	180.6	7.0	61.6	34.1	
08-feb-2017 1...	201702081400	L Neira	07 - 15	4.74	8.69	22.58		1.172	37.9	69.5	180.6	6.3	63.2	35.0	
08-feb-2017 1...	201702081800	E Jaramillo	15 - 23	4.73	8.68	22.71		1.180	37.8	69.4	181.7	6.2	63.2	34.8	
08-feb-2017 2...	201702082200	E Jaramillo	15 - 23	4.26	7.74	21.14		1.177	34.1	61.9	169.1	6.3	55.6	32.9	



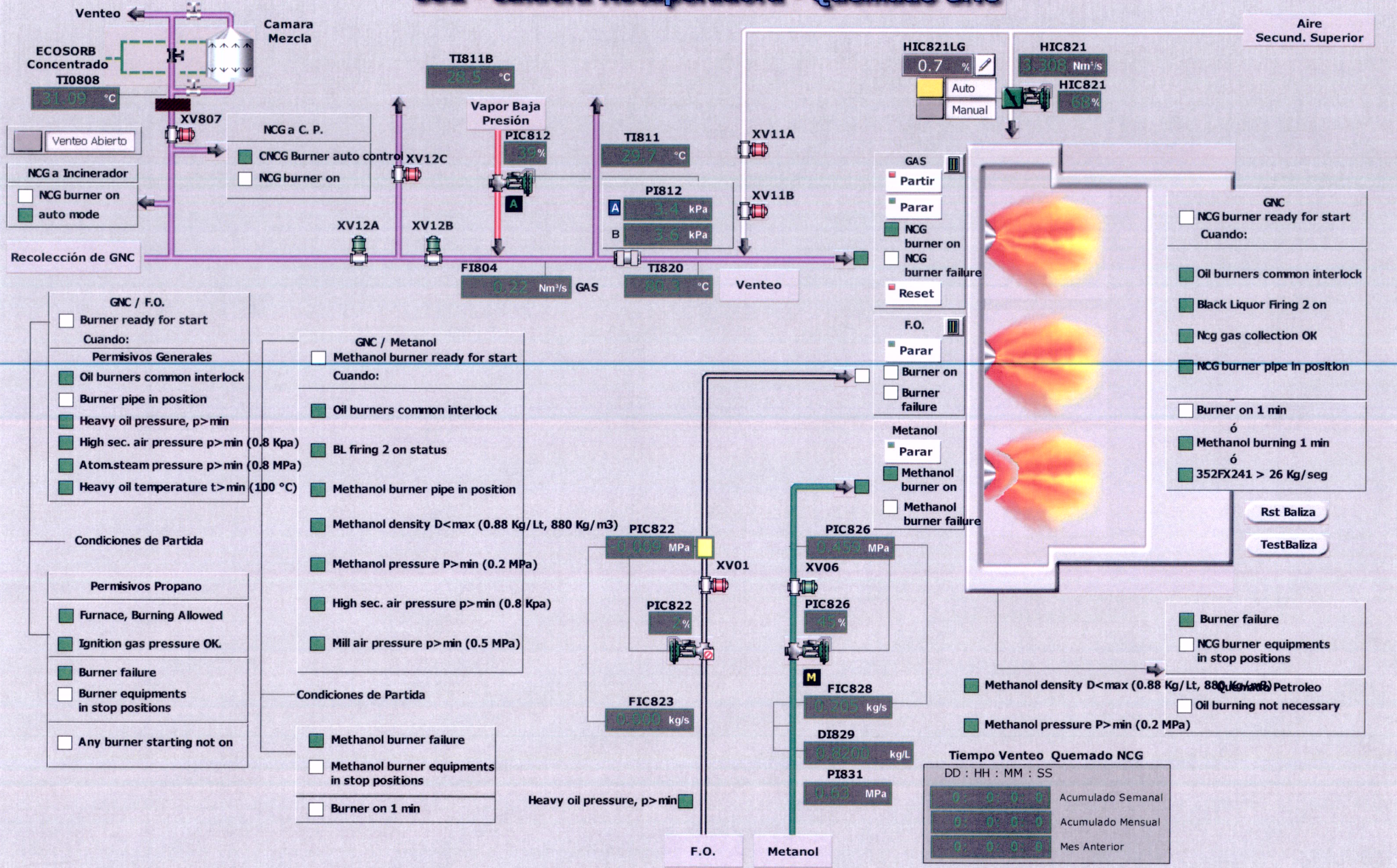
8 Wed Feb 2017

Parameter Reference	Descriptor	Value	Units	Timestamp
1 352LI485/AI1/PV.CV	Floor sump level	111.8	%	2/9/2017 10:40:09 AM

353-Caustificación-Spill y Recuperación de Aguas



352 - Caldera Recuperadora - Quemado GNC



ECOSORB Concentrado
TI0808
31.09 °C

Ventao

Camara Mezcla

Recolección de GNC

Ventao Abierto

NCG a Incinerador

NCG burner on
 auto mode

GNC / F.O.

Burner ready for start
Cuando:

Permisivos Generales

- Oil burners common interlock
- Burner pipe in position
- Heavy oil pressure, p > min
- High sec. air pressure p > min (0.8 Kpa)
- Atom.steam pressure p > min (0.8 MPa)
- Heavy oil temperature t > min (100 °C)

Condiciones de Partida

Permisivos Propano

- Furnace, Burning Allowed
- Ignition gas pressure OK.
- Burner failure
- Burner equipments in stop positions
- Any burner starting not on

GNC / Metanol

Methanol burner ready for start
Cuando:

- Oil burners common interlock
- BL firing 2 on status
- Methanol burner pipe in position
- Methanol density D < max (0.88 Kg/Lt, 880 Kg/m³)
- Methanol pressure P > min (0.2 MPa)
- High sec. air pressure p > min (0.8 Kpa)
- Mill air pressure p > min (0.5 MPa)

Condiciones de Partida

- Methanol burner failure
- Methanol burner equipments in stop positions
- Burner on 1 min

Heavy oil pressure, p > min

F.O. **Metanol**

PIC822 0.009 MPa

XV01

PIC826 0.473 MPa

XV06

PIC826 45 %

FIC823 0.240 kg/s

FIC828 0.205 kg/s

DI829 0.209 kg/L

PI831 0.60 MPa

GAS

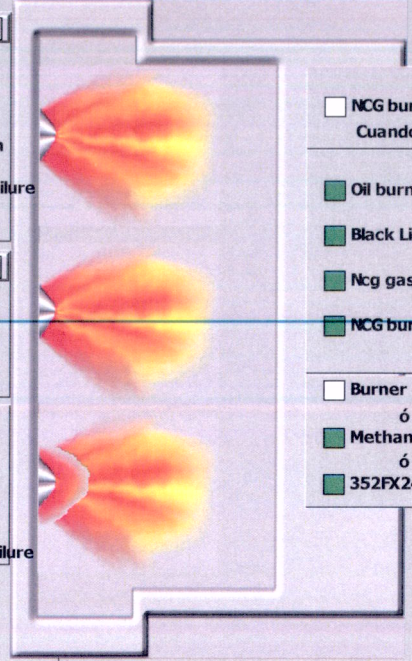
- Partir
- Parar
- NCG burner on
- NCG burner failure
- Reset

F.O.

- Burner on
- Burner failure

Metanol

- Parar
- Methanol burner on
- Methanol burner failure



HIC821LG 0.7 %

HIC821 3.308 Nm³/s

HIC821 68 %

Auto
Manual

Aire Secund. Superior

GNC

- NCG burner ready for start
Cuando:
- Oil burners common interlock
- Black Liquor Firing 2 on
- Ncg gas collection OK
- NCG burner pipe in position
- Burner on 1 min
ó
- Methanol burning 1 min
ó
- 352FX241 > 26 Kg/seg

- Burner failure
- NCG burner equipments in stop positions
- Methanol density D < max (0.88 Kg/Lt, 880 Kg/m³) Petroleo
- Methanol pressure P > min (0.2 MPa)
- Oil burning not necessary

Tiempo Ventao Quemado NCG

DD : HH : MM : SS

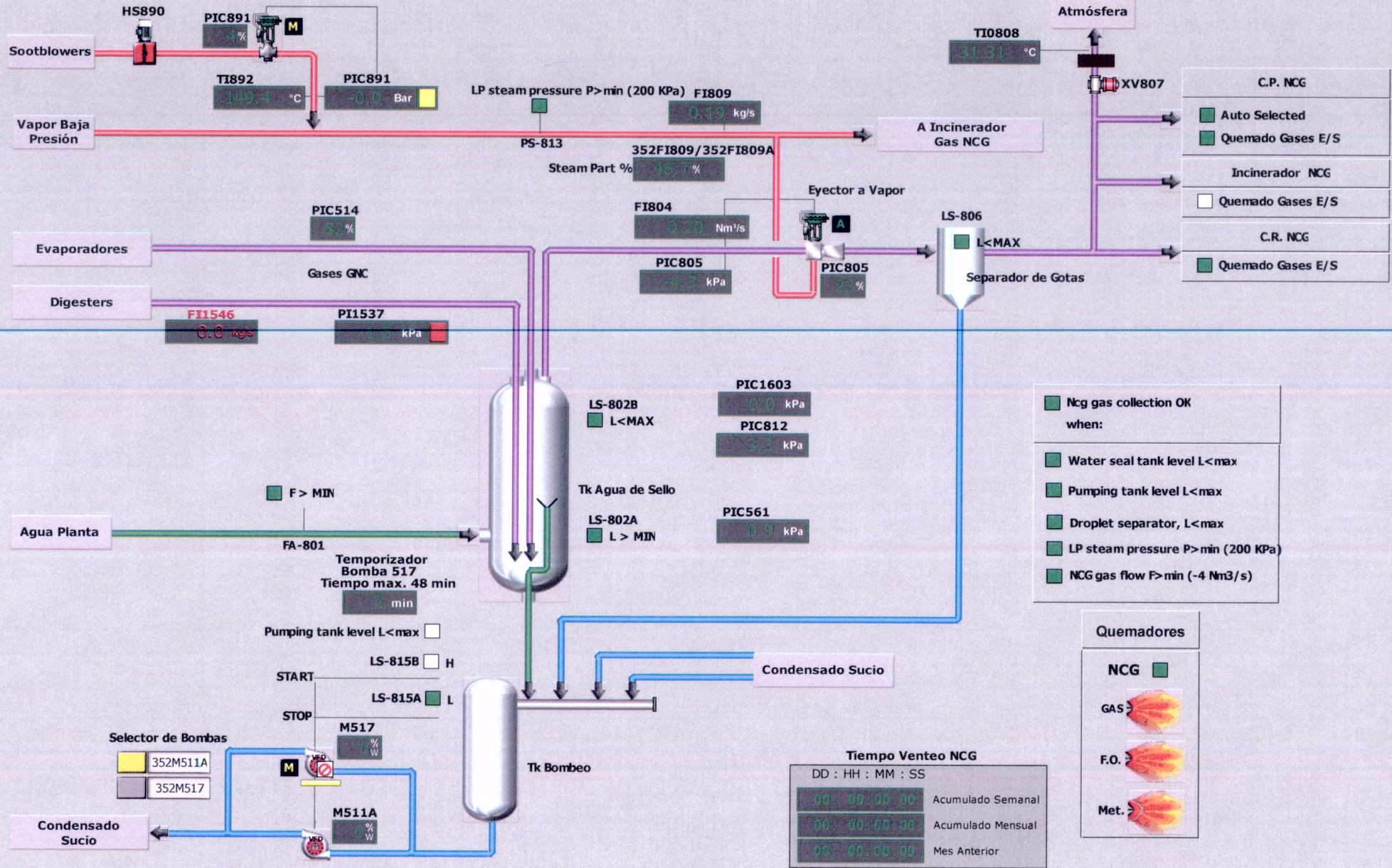
0 : 0 : 0 : 0	Acumulado Semanal
0 : 0 : 0 : 0	Acumulado Mensual
0 : 0 : 0 : 0	Mes Anterior

Rst Baliza
TestBaliza

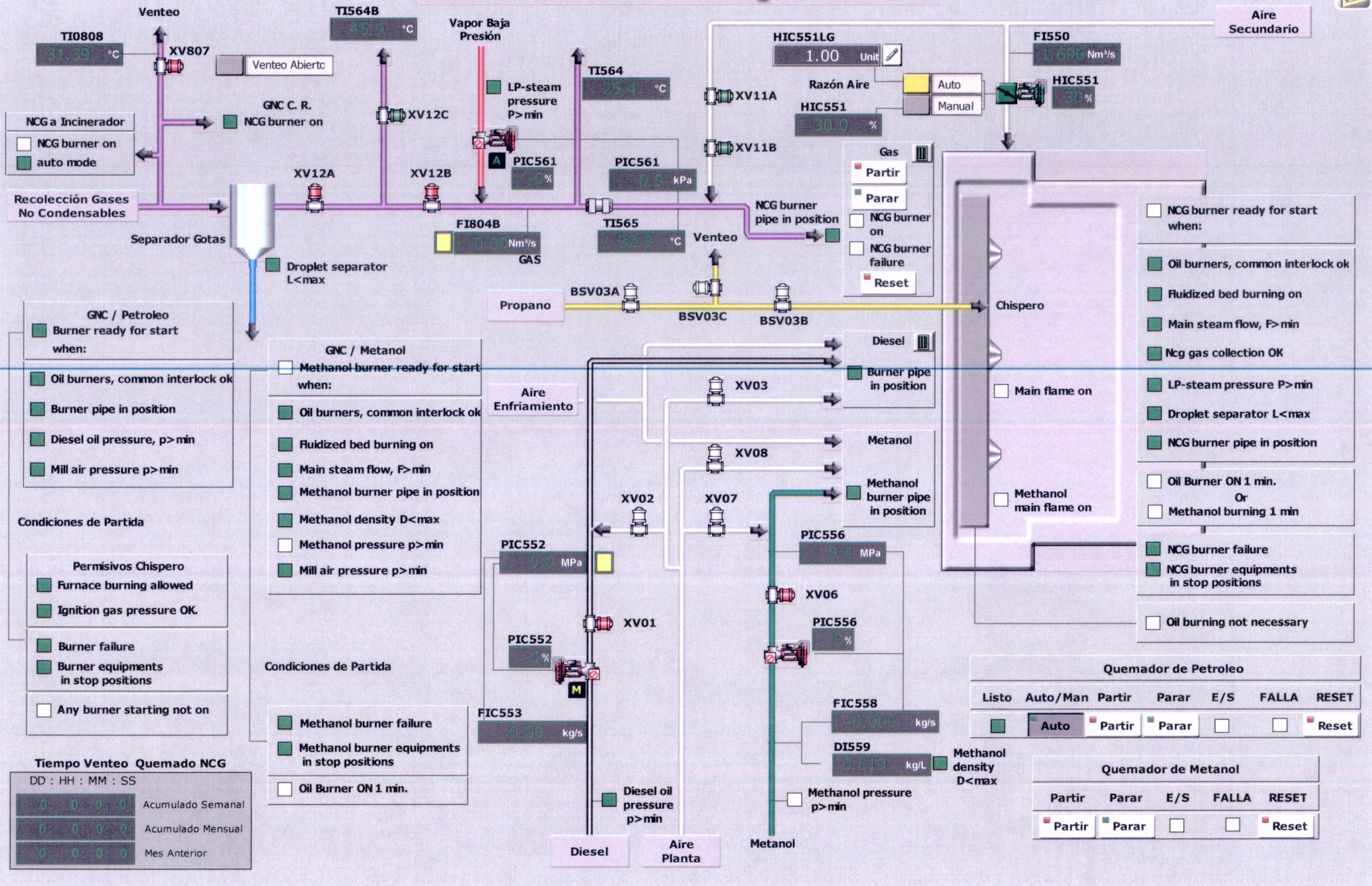
352 - Caldera Recuperadora - Recolección y Acondicionamiento NCG Concentrados



2/9/2017
10:50:27 AM



363 - Caldera de Poder - Quemado GNC



NCG a Incinerador
 NCG burner on
 auto mode

Droplet separator L<max

GNC / Petroleo
 Burner ready for start when:
 Oil burners, common interlock ok
 Burner pipe in position
 Diesel oil pressure, p>min
 Mill air pressure p>min

Condiciones de Partida
Permisivos Chispero
 Furnace burning allowed
 Ignition gas pressure OK

Burner failure
 Burner equipments in stop positions
 Any burner starting not on

Tiempo Venteo Quemado NCG
 DD : HH : MM : SS
 0 : 0 : 0 : 0 Acumulado Semanal
 0 : 0 : 0 : 0 Acumulado Mensual
 0 : 0 : 0 : 0 Mes Anterior

GNC / Metanol
 Methanol burner ready for start when:
 Oil burners, common interlock ok
 Fluidized bed burning on
 Main steam flow, F>min
 Methanol burner pipe in position
 Methanol density D<max
 Methanol pressure p>min
 Mill air pressure p>min

Condiciones de Partida
 Methanol burner failure
 Methanol burner equipments in stop positions
 Oil Burner ON 1 min.

Gas
 Partir
 Parar
 NCG burner on
 NCG burner failure
 Reset

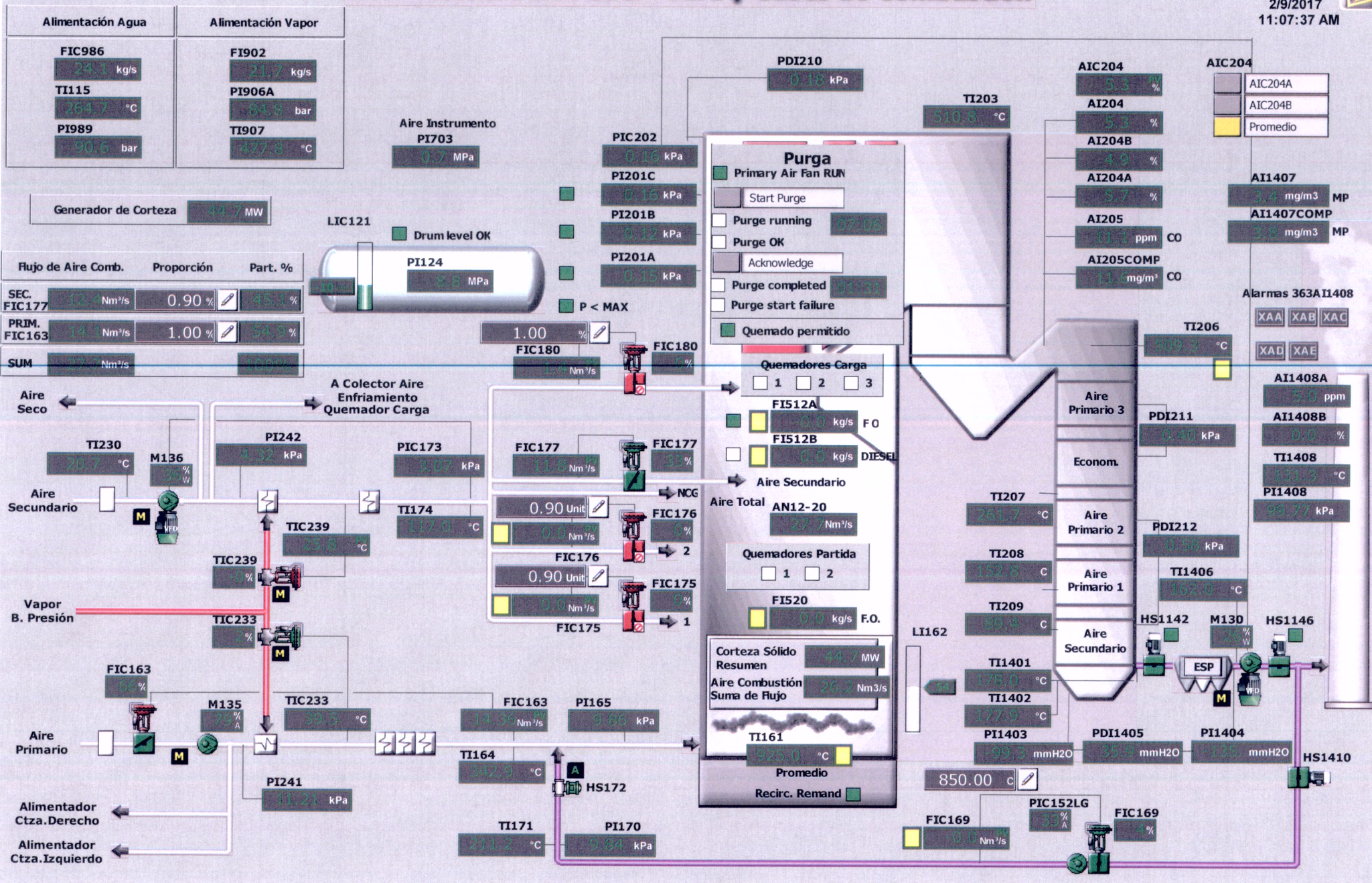
NCG burner ready for start when:
 Oil burners, common interlock ok
 Fluidized bed burning on
 Main steam flow, F>min
 Ncg gas collection OK
 LP-steam pressure P>min
 Droplet separator L<max
 NCG burner pipe in position
 Main flame on
 Methanol main flame on
 Oil Burner ON 1 min.
 Or
 Methanol burning 1 min
 NCG burner failure
 NCG burner equipments in stop positions
 Oil burning not necessary

Quemador de Petroleo
 Listo Auto/Man Partir Parar E/S FALLA RESET
 Auto Partir Parar E/S FALLA RESET

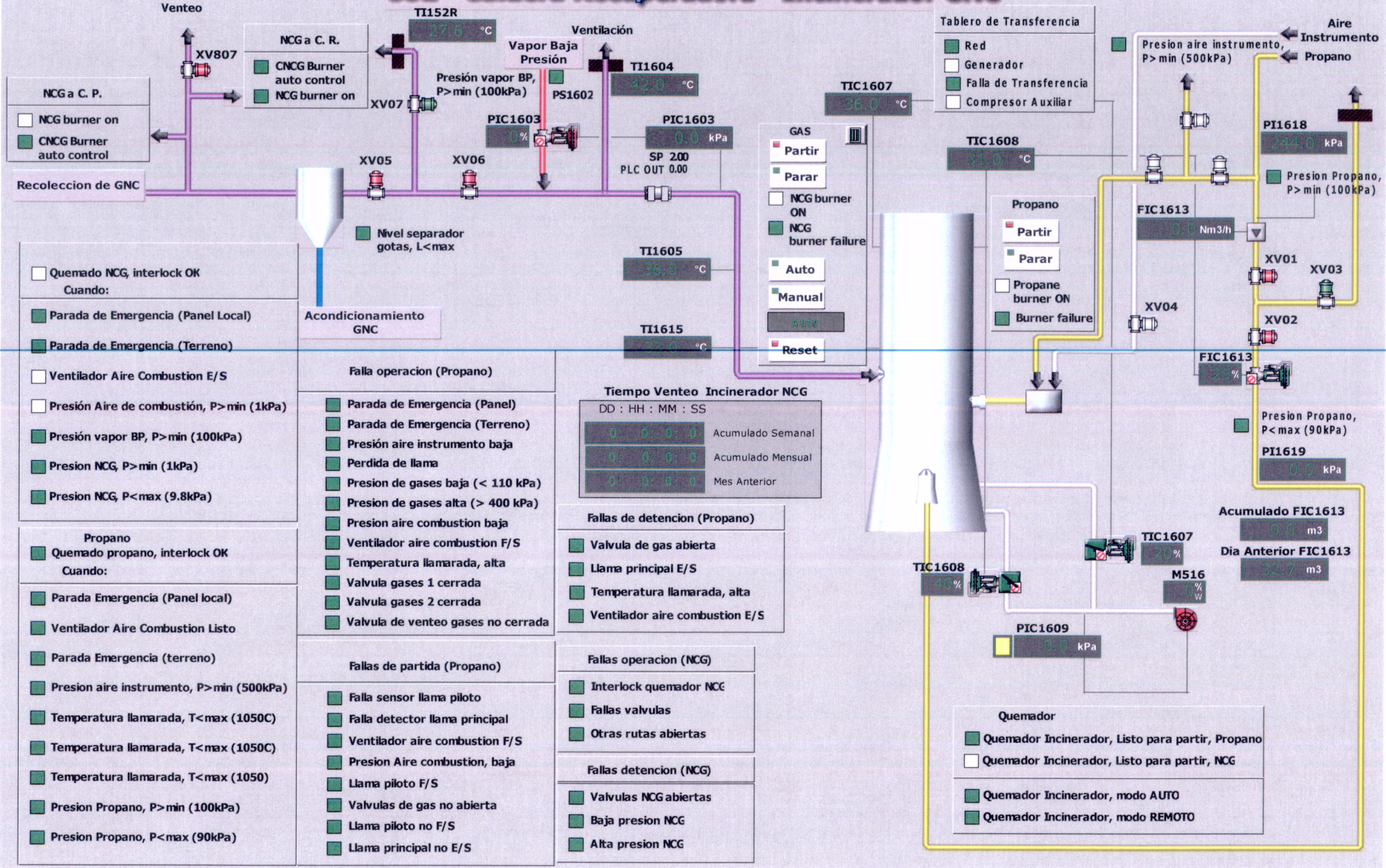
Quemador de Metanol
 Partir Parar E/S FALLA RESET
 Partir Parar E/S FALLA RESET

363 - Caldera de Poder - Aire y Gases de Combustión

2/9/2017
11:07:37 AM

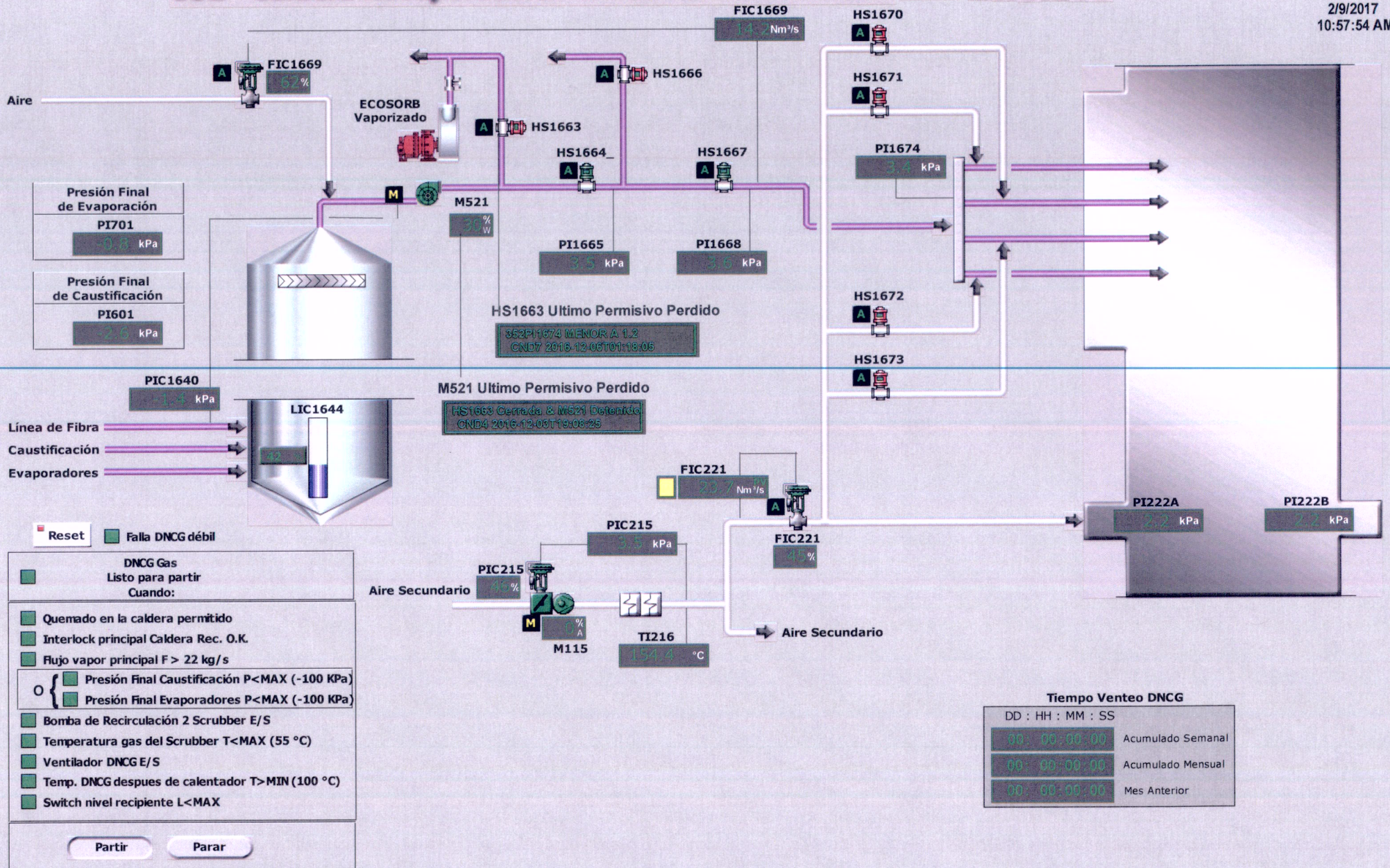


352 - Caldera Recuperadora - Incinerador GNC



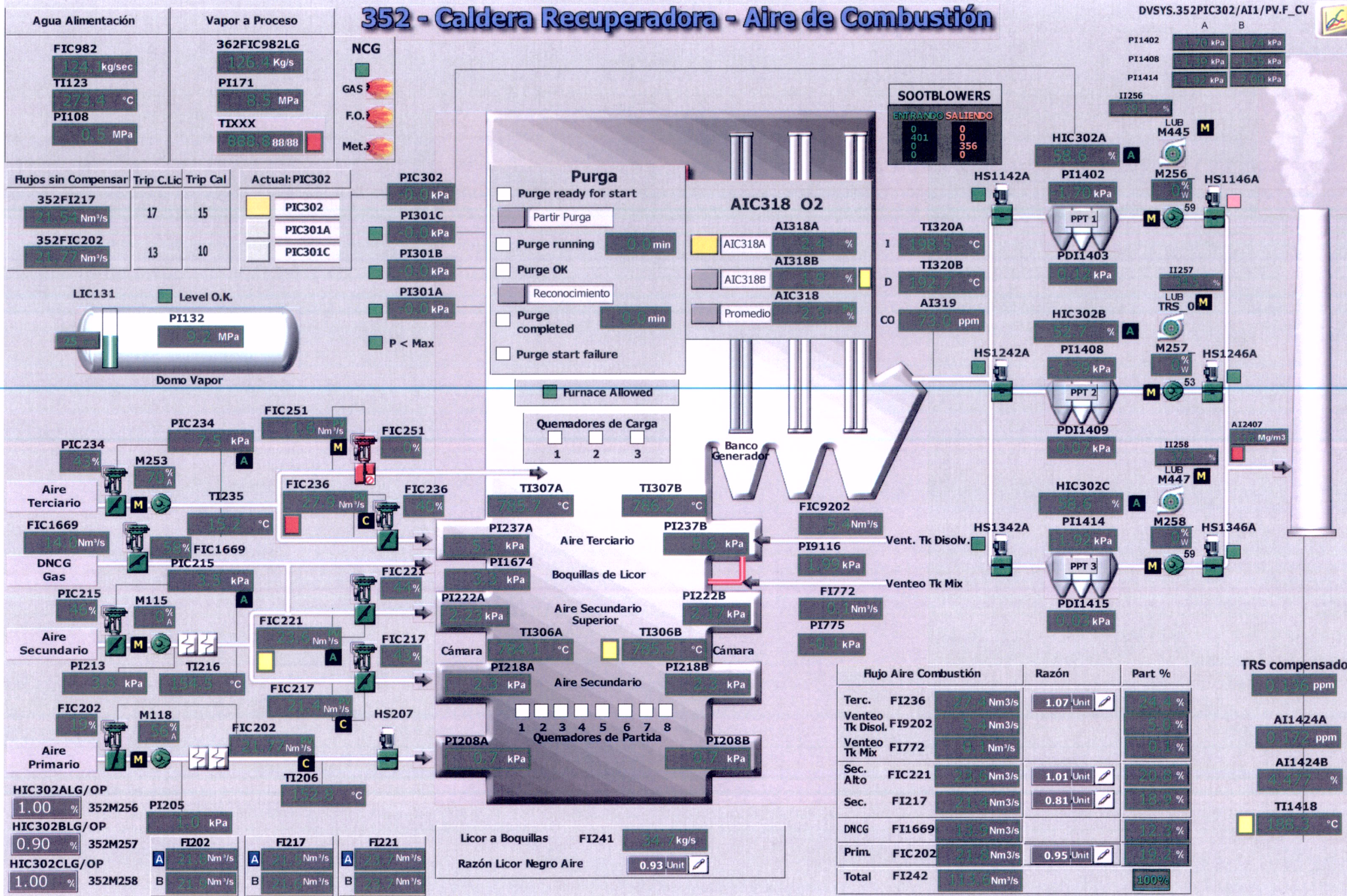
352 - Caldera Recuperadora - DNCG Aire Combustión NCG Diluidos

2/9/2017
10:57:54 AM



352 - Caldera Recuperadora - Aire de Combustión

DVSYS.352PIC302/AI1/PV.F_CV



Agua Alimentación

FIC982
124. kg/sec

TI123
273.4 °C

PI108
0.5 MPa

Vapor a Proceso

362FIC982LG
126.4 Kg/s

PI171
8.5 MPa

TIXXX
888.8 88.88

NCG

GAS

F.O.

Met.

Fujos sin Compensar

Trip C.Lic	Trip Cal
352FI217 21.54 Nm ³ /s	17
352FIC202 21.77 Nm ³ /s	13

Actual: PIC302

PIC302

PIC301A

PIC301C

PIC302
-9.0 kPa

PI301C
-9.0 kPa

PI301B
-9.0 kPa

PI301A
-9.0 kPa

P < Max

Purga

Purge ready for start

Purge running 0:0 min

Purge OK

Purge completed 0:0 min

Purge start failure

Furnace Allowed

Quemadores de Carga

1 2 3

AIC318 O2

AI318A 3.4 %

AI318B 3.9 %

AIC318 Promedio 2.3 %

SOOTBLOWERS

ENTRANDO SALIENDO

0	0
401	356
0	0

	A	B
PI1402	1.70 kPa	1.77 kPa
PI1408	1.35 kPa	1.35 kPa
PI1414	1.92 kPa	2.01 kPa

LIC131

PI132
3.2 MPa

Domo Vapor

Aire Terciario

PIC234 43%

FIC251 1.8 Nm³/s

FIC236 27.6 Nm³/s

FIC1669 14.1 Nm³/s

PIC215 3.5 kPa

Aire Secundario

PIC215 4%

FIC221 23.9 Nm³/s

FIC217 21.4 Nm³/s

FIC202 21.7 Nm³/s

Aire Primario

FIC202 15%

TI206 152.8 °C

Quemadores de Partida

1 2 3 4 5 6 7 8

TI307A 785.7 °C

TI307B 786.2 °C

TI306A 784.1 °C

TI306B 785.5 °C

PI237A 5.3 kPa

PI1674 3.3 kPa

PI222A 2.23 kPa

PI218A 2.3 kPa

PI208A 0.7 kPa

PI237B 5.6 kPa

PI222B 2.17 kPa

PI218B 2.3 kPa

PI208B 0.7 kPa

Banco Generador

FIC9202 5.4 Nm³/s

PI9116 1.99 kPa

FI772 0.1 Nm³/s

PI775 59.1 kPa

HIC302A 58.6 %

PI1402 1.70 kPa

PDI1403 0.12 kPa

HIC302B 52.7 %

PI1408 1.35 kPa

PDI1409 0.07 kPa

HIC302C 58.6 %

PI1414 1.92 kPa

PDI1415 0.03 kPa

Fuajo Aire Combustión	Razón	Part %
Terc. FI236 27.4 Nm ³ /s	1.07 Unit	24.4 %
Vent. Tk Disol. FI9202 5.4 Nm ³ /s		5.5 %
Vent. Tk Mix FI772 0.1 Nm ³ /s		0.1 %
Sec. Alto FIC221 23.9 Nm ³ /s	1.01 Unit	28.8 %
Sec. FIC217 21.4 Nm ³ /s	0.81 Unit	18.9 %
DNCG FI1669 14.1 Nm ³ /s		12.3 %
Prim. FIC202 21.7 Nm ³ /s	0.95 Unit	19.2 %
Total FI242 113.6 Nm³/s		100%

TRS compensado

0.136 ppm

AI1424A 0.572 ppm

AI1424B 4.477 %

TI1418 186.3 °C

352 - Caldera Recuperadora - Scrubber Enfriador de DNCG

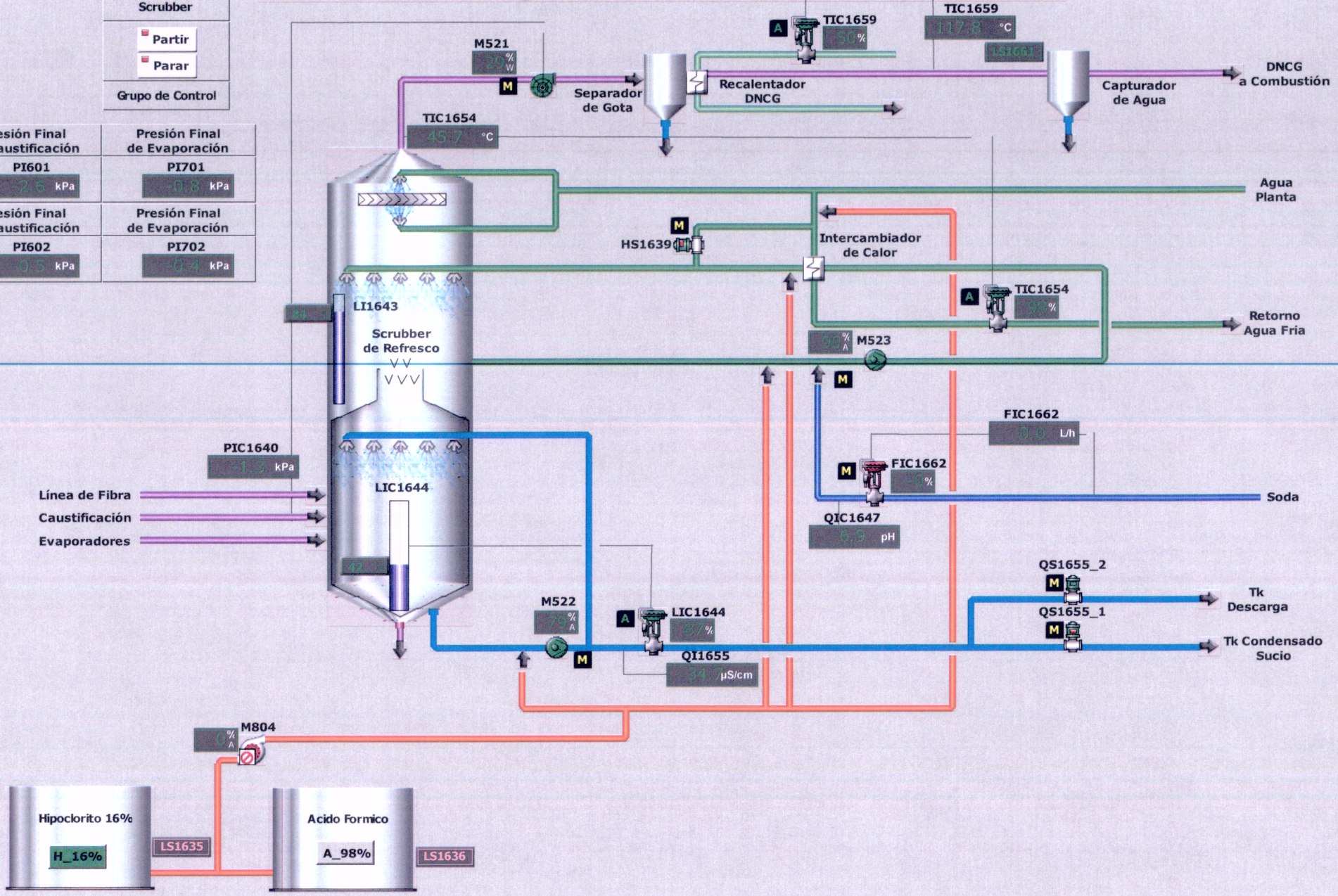


Scrubber

Partir
 Parar

Grupo de Control

Presión Final de Caustificación	Presión Final de Evaporación
PI601	PI701
-2.6 kPa	0.8 kPa
Presión Final de Caustificación	Presión Final de Evaporación
PI602	PI702
-0.5 kPa	0.4 kPa



Línea de Fibra
Caustificación
Evaporadores

Hipoclorito 16%
H_16%

Acido Formico
A_98%

DNCG a Combustión

Agua Planta

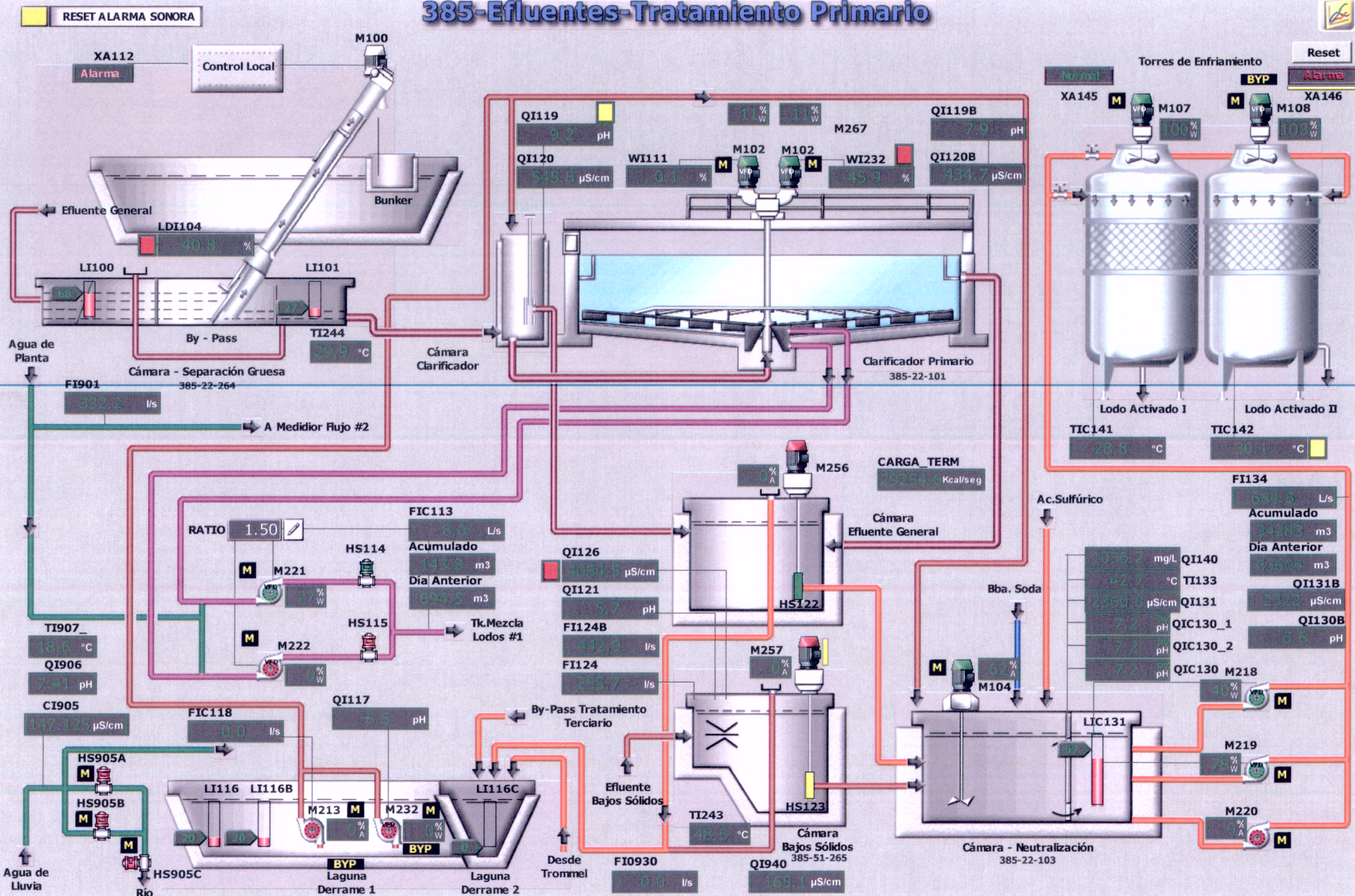
Retorno Agua Fria

Soda

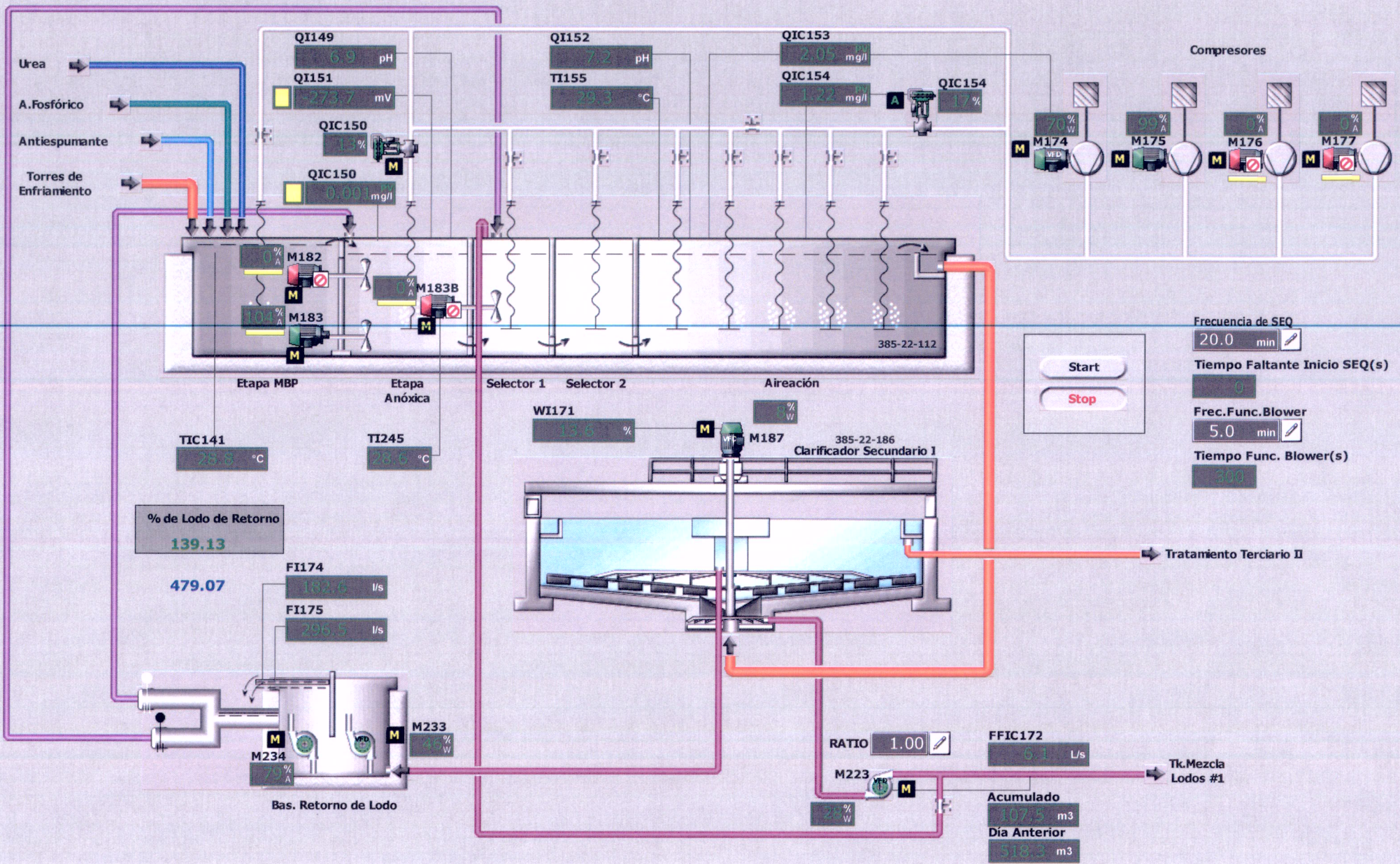
Tk Descarga

Tk Condensado Sucio

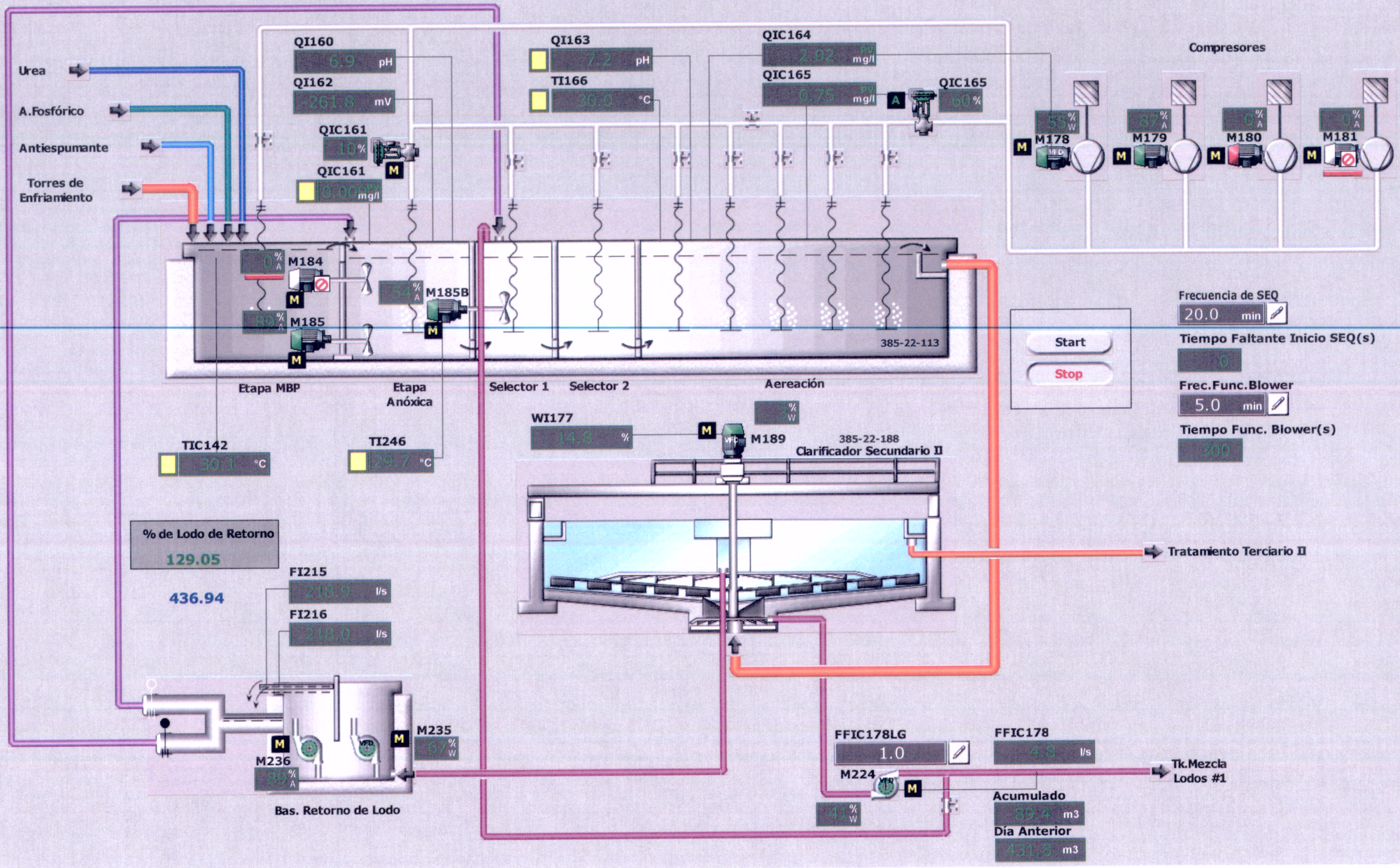
385-Efluentes-Tratamiento Primario



385-Efluentes-Lodo Activado y Clarificación I



385-Efluentes-Lodo Activado y Clarificación II



385-Efluentes-Tratamiento Terciario

