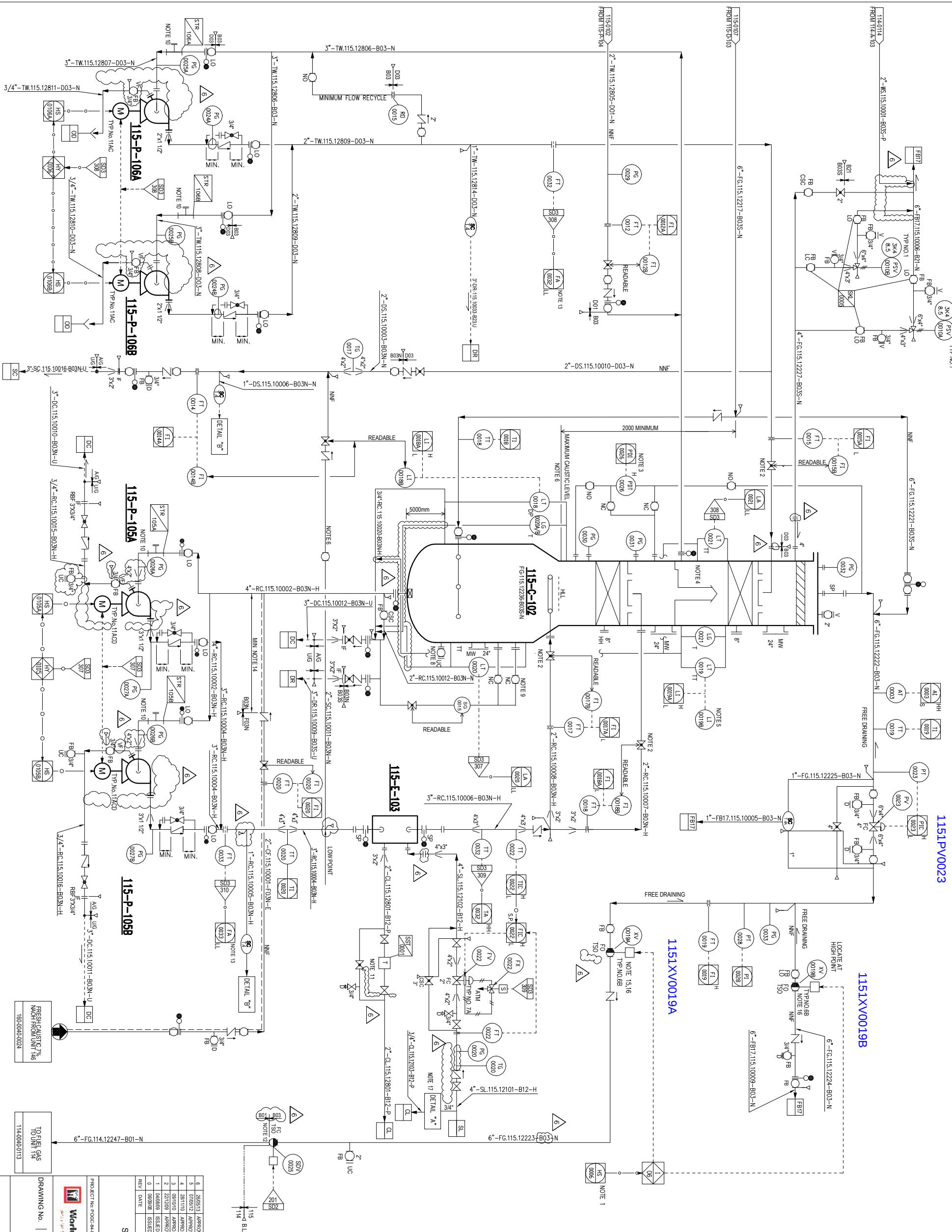


ITEM TYPE CAPACITY DIFF. PRESS. ABSORBED POWER	115-P-106 A/B (2x100%) WATER CIRCULATION PUMPS 91 m ³ /h 2.1 bar 1.7kW	ITEM SERVICE TYPE DUTY/SURFACE DESIGN. PRESS. INSULATION	115-E-103 CROSSCUT CYCLE HEATER DOUBLE PRE 0.347 MW/6.2 m2 SHELL TUBE 14.3barg 11.0 barg 85°C 270°C	ITEM SERVICE TYPE ID/LL/TL CAPACITY DIFF. PRESS. INSULATION	115-C-102 CAUSTIC SCRUBBER TOP:800mmx1200mm BOTTOM:2400mmx3800mm 8.5 barg TOP/9.4 barg BOT/TV 85°C YES
--	---	---	---	---	--



1151PV0023

1151XY0019B

1151XY0019A

- NOTES**
- 1- OPERATOR SHOULD BE ABLE TO SWITCH FROM FUEL GAS TO FLARE DURING NORMAL OPERATION IN CASE OF SCRUBBER UPSET.
 - 2- VALVE WITH MECHANICAL LIMIT STOP (IN ORDER TO AVOID FALL CLOSURE OF VALVE)
 - 3- INSTRUMENT SHALL BE SEA FLOWING.
 - 4- HLL MUST BE DEFINED AT CHIMNEY TOP. TOWER WILL BE OPERATED UNDER AT HLL/HIGH LIQUID LEVEL.
 - 5- LIT TO BE READABLE FROM GLOBE VALVE ON DEMINERALIZED WATER.
 - 6- FOR CAUSTIC INVENTORY REMOVAL OPERATION.
 - 7- DELETED.
 - 8- NO STEAM OUT IS ALLOWED IF CAUSTIC SODA IS NOT PROPERLY REMOVED FROM SCRUBBER.
 - 9- FOR HC PHASE DRAINING SNIWMING.
 - 10- FOR FILTER ARRANGEMENT REFER TO TABLE 'A' ON PID-1718-999-003-0006.
 - 11- STEAM TRAP.
 - 12- FIRE RESISTANT VALVE, ALL INSTRUMENTS, BOX PROTECTION TUBING, CABLES ETC., WILL BE SELECTED AND CLASSIFIED ACCORDING TO THIS PROTECTION).
 - 13- ON LOW FLOW DUTY PUMP IS STOPPED AND STANDBY PUMP STARTED.
 - 14- AFTER 30 SEC DOWNS FLOW REMAINS LOW LOW PUMPS ARE TRIPPED.
 - 15- 1.5 SEC TO BE IMPLEMENTED ON THE AIR CIRCUIT FOR OPENING AND CLOSING POSITION (CLOSE TO OPEN TO CLOSE) 2 MINUTES APPROXIMATELY. OPENING AND CLOSING TIME BE TUNABLE N ORDER TO BE ADJUSTED ON SITE).
 - 16- RISING STEM BALL VALVE.
 - 17- DRIP LEGS FOR DETAIL 'A' REFER TO PID-1718-986-004-0001.

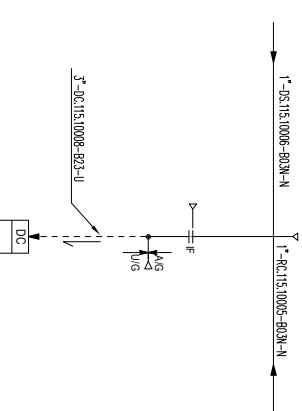
HOLDS

1- DELETED.
2- DELETED.
3- DELETED.

GENERAL NOTES

ALL INSTRUMENT TAGS TO READ:
LETTERS NUMBER
1151 FFF NNNN

DETAIL 'B'



THIS P&ID IS BASED ON DRAWING NO. 115-PID-986 SUPPLIED BY AXENS.

EQUIPMENT LIST			
COLUMN	PUMPS	EXCHANGER	
115-C-102	115-P-105A/B	115-E-103	
	115-P-105A/B		

UTILITY PID NUMBER

DC	PD-1718-186-004-0005	SL	PD-1718-186-004-0001
DR	PD-1718-186-004-0005	CL	PD-1718-186-004-0001
FB17	PD-1718-186-004-0004		
SC	PD-1718-186-004-0005		

1	20/09/08	ISSUED FOR DESIGN	AI	REV	RC	APPROVED	DATE
0	00/00/00	ISSUED FOR W&P	AI	REV	RC	APPROVED	DATE
1	00/00/00	ISSUED FOR DESIGN	AI	REV	RC	APPROVED	DATE
2	22/12/09	APPROVED FOR DESIGN	AI	REV	RC	APPROVED	DATE
3	08/10/10	APPROVED FOR CONSTRUCTION	AI	REV	RC	APPROVED	DATE
4	28/11/10	APPROVED FOR CONSTRUCTION	AI	REV	RC	APPROVED	DATE
5	07/05/12	APPROVED FOR CONSTRUCTION	AI	REV	RC	APPROVED	DATE
6	28/01/12	APPROVED FOR CONSTRUCTION	AI	REV	RC	APPROVED	DATE

PROJECT NO. PD-04-801-244	DOC. CLASS	1	SCALE	N/A
DRAWING NO. UNIT 115: BUTANE TREATMENT AND DRYING	IPRO	QIEC	IPRO	QIEC
CAUSTIC SCRUBBER	IPRO	QIEC	IPRO	QIEC
PIPING AND INSTRUMENT DIAGRAM	IPRO	QIEC	IPRO	QIEC
PID-1718-115-0030-0108	REVISION	6		