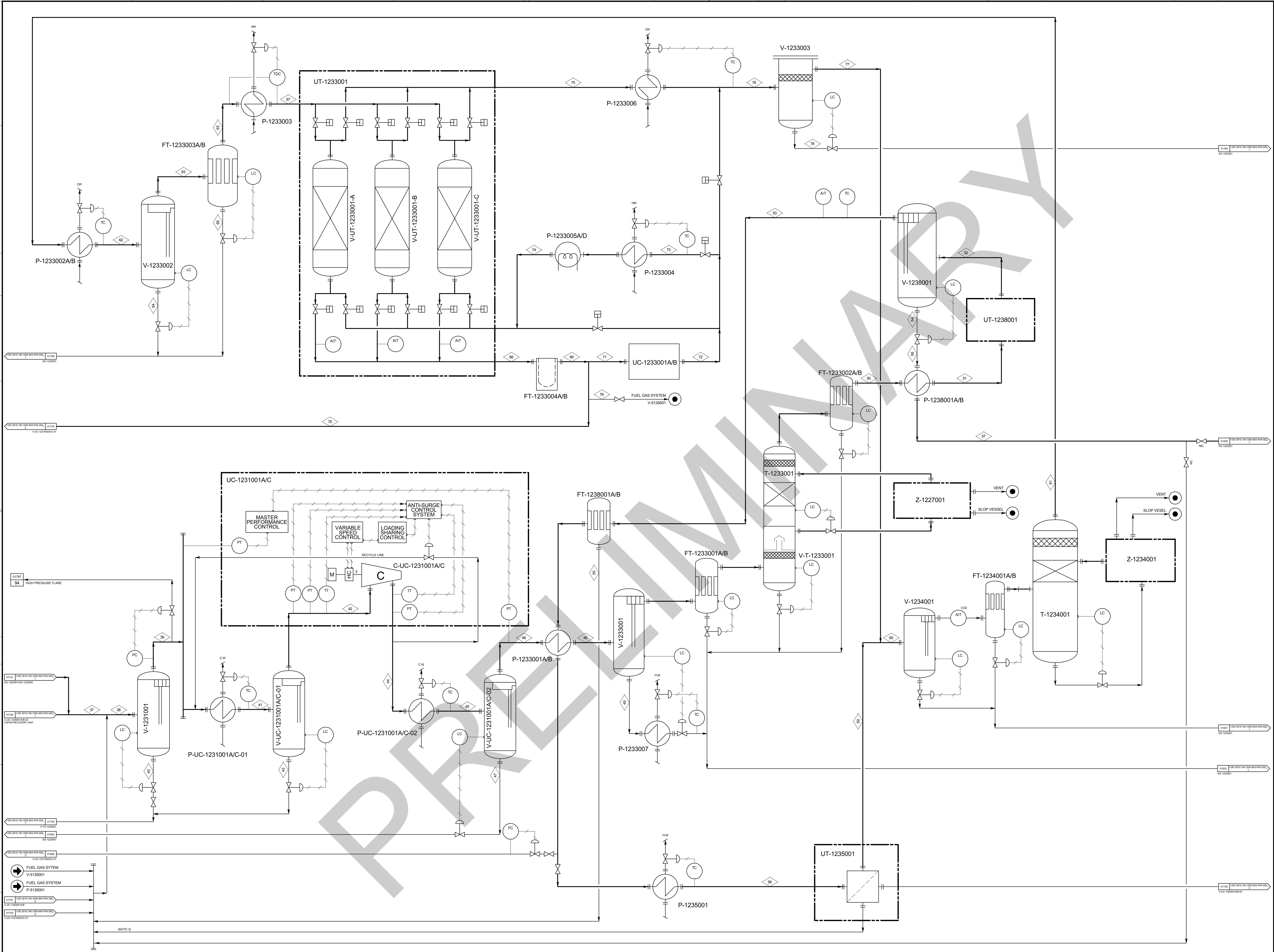

REFERENCE DOCUMENTS

I-ET-3000.00-0000-940-P4X-002 - SYMBOLS FOR PRODUCTION UNITS DESIGN

EQUIPMENT

TAG	DESCRIPTION	TYPE	CAPACITY
C-UC-1231001A/C (3 x 50%)	MAIN GAS COMPRESSOR	Centrifugal	3700000 m³/d
FT-1233001A/B (2 x 100%)	TEG INLET GAS COALESCER FILTER	Coalescer	7400000 m³/d
FT-1233002A/B (2 x 100%)	TEG OUTLET GAS COALESCER FILTER	Coalescer	7400000 m³/d
FT-1233003A/B (2 x 100%)	MOLECULAR SIEVE GAS COALESCER FILTER	Coalescer	4100000 m³/d
FT-1233004A/B (2 x 100%)	MOLECULAR SIEVE PARTICULATE FILTER	Cartridge	4100000 m³/d
FT-1234001A/B (2 x 100%)	SOUR GAS COALESCER FILTER	Coalescer	4100000 m³/d
FT-1238001A/B (2 x 100%)	COALESCER FILTER	Coalescer	7000000 m³/d
P-1233001A/B (2 x 50%)	TEG INLET GAS COOLER	Shell and Tube	2276 kW
P-1233002A/B (2 x 50%)	MOLECULAR SIEVE INLET GAS COOLER	Shell and Tube	775 kW
P-1233003 (1 x 100%)	MOLECULAR SIEVE INLET GAS HEATER	Shell and Tube	622 kW
P-1233004 (1 x 100%)	MOLECULAR SIEVE REGENERATION GAS PRE-HEATER	Shell and Tube	912 kW
P-1233005A/D (4 x 33%)	MOLECULAR SIEVE REGENERATION GAS HEATER	Electrical	722 W
P-1233006 (1 x 100%)	MOLECULAR SIEVE REGENERATION GAS COOLER	Shell and Tube	3471 kW
P-1233007 (1 x 100%)	TEG INLET GAS K.O. DRUM CONDENSATE HEATER	Shell and Tube	631 kW
P-1235001 (1 x 100%)	CO2 REMOVAL UNIT PRE-HEATER	Shell and Tube	5.0 MW
P-1238001A/B (2 x 50%)	GAS/LIQUID EXCHANGER	Shell and Tube	1.0E+06 W
P-UC-1231001A/C-01 (3 x 50%)	MAIN GAS COMPRESSOR SUCTION COOLER	Shell and Tube	10 MW
P-UC-1231001A/C-02 (3 x 50%)	MAIN GAS COMPRESSOR DISCHARGE COOLER	Shell and Tube	14 MW
T-1233001 (1 x 100%)	TEG CONTACTOR	Packing	7400000 m³/d
T-1234001 (1 x 50%)	AMINE CONTACTOR	Packing	2050000 m³/d
UC-1231001A/C (3 x 50%)	MAIN GAS COMPRESSION UNIT		-
UC-1233001A/B (2 x 100%)	MOLECULAR SIEVE REGENERATION GAS COMPRESSION UNIT	Centrifugal	440000 m³/d
UT-1233001 (1 x 100%)	MOLECULAR SIEVE UNIT	Packed	4100000 m³/d
UT-1235001 (1 x 100%)	CO2 REMOVAL UNIT	Membrane	6000000 m³/d
UT-1238001 (1 x 100%)	HYDROCARBON DEW POINT CONTROL SYSTEM	Packed	7400000 Sm³/d
V-1231001 (1 x 100%)	SAFETY GAS K.O. DRUM	Vertical	7400000 m³/d
V-1233001 (1 x 100%)	TEG INLET GAS K.O. DRUM	Vertical	7400000 m³/d
V-1233002 (1 x 100%)	MOLECULAR SIEVE INLET GAS K.O. DRUM	Vertical	4100000 m³/d
V-1233003 (1 x 100%)	REGENERATION GAS SEPARATOR	Vertical	440000 m³/d
V-1234001 (1 x 100%)	AMINE INLET GAS KO DRUM	Vertical	4100000 m³/d
V-1238001 (1 x 100%)	COLD SEPARATOR	Vertical	7000000 m³/d
V-T-1233001 (1 x 100%)	CONTACTOR K.O.DRUM	Vertical	7400000 m³/d
V-UC-1231001A/C-01 (3 x 50%)	MAIN GAS COMPRESSOR SUCTION SCRUBBER	Vertical	3700000 m³/d
V-UC-1231001A/C-02 (3 x 50%)	MAIN GAS COMPRESSOR DISCHARGE SCRUBBER	Vertical	3700000 m³/d
V-UT-1233001-A/C (3 x 50%)	MOLECULAR SIEVE ADSORBERS	Vertical	2050000 m³/d
Z-1227001 (1 x 100%)	TEG REGENERATION PACKAGE		-
Z-1234001 (1 x 100%)	AMINE REGENERATION PACKAGE		-

GENERAL NOTES

1 - LIQUID CAPACITIES ARE AT STANDARD CONDITIONS OF 15.6ºC AND 101.3 kPa abs.
2 - GAS CAPACITIES ARE AT STANDARD CONDITIONS OF 15.6ºC AND 101.3 kPa abs.
3 - CONDENSATE WOULD BE EXPECTED THROUGH CO2 REMOVAL MEMBRANES. THE CONDENSATION AND FLOW RATE OF THIS STREAM SHALL BE CONFIRMED BY PACKEGER.
4 - FLOW RATE AT PRESSURE AND TEMPERATURE OPERATIONAL CONDITIONS.

STREAM N.	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
OIL VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)			0.0	0.0	0.0	0.0	0.0		8.5	0.0	0.0	48.9	0.0		
GAS VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)	16428.6	16425.8	16797.3	0.0	16415.7	16811.5	0.0	5739.1	3452.4	16797.3	0.0	3029.1	3050.3	3185.3	3185.3
WATER VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)				203.9	0.3	0.0	0.3		0.6			0.2	0.0		
MOLECULAR MASS (kg/kmol)	28.5	28.5	28.5	103.9	28.5	28.5	18.4	28.5	28.5	28.5	103.9	28.3	27.5	27.5	27.5
PRESSURE (kPa abs)	1850.0	1850.0	1810.0	1810.0	1740.0	1700.0	1700.0	6610.0	6540.0	1810.0	1810.0	6430.0	6390.0	6230.0	6230.0
TEMPERATURE (C°)	57	57	57	57	40	40	40	147	40	57	57	24	23	24	24
HYDROGEN SULFIDE (H2S) (ppmmol)	402.6666	402.8284	402.8284	259.8785	402.8284	403.4583	7.8125	403.4583	403.4583	402.8284	259.8785	403.9238	396.6467	396.9278	396.9278
CARBON DIOXIDE (CO2) (%mol)	23.1773	23.1744	23.1744	6.1732	23.1744	23.2111	0.1454	23.2111	23.2111	23.1744	6.1732	23.3515	23.7013	23.7181	23.7181
NOTES:															

STREAM N.	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
OIL VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)	51.5	0.0	0.8	0.8	33.3	25.3									
GAS VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)	2789.4	2810.4	0.0	0.0	210.7	403.5	3724.4	2449.1	2743.8	3090.9	2920.8	2944.8	0.0	2975.2	0.0
WATER VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)											0.2	0.0	0.2	0.0	0.0
MOLECULAR MASS (kg/kmol)	27.5	26.7	40.7	40.7	40.7	40.7	26.7	23.3	23.3	23.3	23.3	23.3	18.0	23.3	18.0
PRESSURE (kPa abs)	6090.0	6050.0	6000.0	6000.0	2100.0	2030.0	5860.0	5360.0	5360.0	5170.0	5100.0	5060.0	5060.0	5010.0	5010.0
TEMPERATURE (C°)	9	9	9	9	-14	19	40	40	40	53	40	40	40	39	39
HYDROGEN SULFIDE (H2S) (ppmmol)	396.9278	383.4667	606.5491	606.5491	603.7244	603.7244	383.2440	48.0134	42.8312	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CARBON DIOXIDE (CO2) (%mol)	23.7181	23.9703	19.7602	19.7602	19.8017	19.8017	23.9745	3.0036	3.0096	3.0004	3.0004	3.0050	0.0419	3.0050	0.0418
NOTES:															

STREAM N.	67	68	69	70	71	72	73	74	75	76	77	78	79				
OIL VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)			0.0	0.0	0.0					0.0	0.0	0.0					
GAS VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)	3114.2	3131.7	3165.0	0.0	339.0	303.0	417.4	632.4	649.1	291.2	293.5	0.0	796.7				
WATER VOLUMETRIC FLOW RATE (NOTE 4) (m³/h)										0.2	0.0	0.2					
MOLECULAR MASS (kg/kmol)	23.3	23.3	23.3	38.8	23.3	23.3	23.3	23.3	23.5	23.5	23.5	18.8	23.3				
PRESSURE (kPa abs)	4940.0	4910.0	4860.0	4860.0	4860.0	5650.0	5580.0	5510.0	5470.0	5400.0	5360.0	5360.0	4860.0				
TEMPERATURE (C°)	44	44	44	44	44	56	130	290	290	40	40	40	44				
HYDROGEN SULFIDE (H2S) (ppmmol)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
CARBON DIOXIDE (CO2) (%mol)	3.0050	3.0113	3.0113	2.0445	3.0113	3.0113	3.0113	3.0113	2.9534	2.9534	2.9961	0.0741	3.0113				
NOTES:																	

REV.	DESCRIPTION	DATE	EXEC.	CHECK	APPROV.
0	ORIGINAL ISSUE		LEANDRO	LARISSA	RENATAD

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PETROBRAS | DP&T-SRGE

CLIENT: SRGE

JOB: REFERENCE BASIC DESIGN

AREA: BÚZIOS

TITLE: PIPING AND INSTRUMENT DIAGRAM
PROCESS PLANT OVERVIEW

DESIGN: ESUP | EXEC.: FERNANDAR.TGP | CHECK: | APPROV.:

SCALE: NO SCALE | DRAWING | 1001056398 0010 | SHEET: 02 of 03

NP-1 | ESUP

DATE: | No. I-DE-3010.1M-1200-943-P4X-002

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1189mm X 841mm