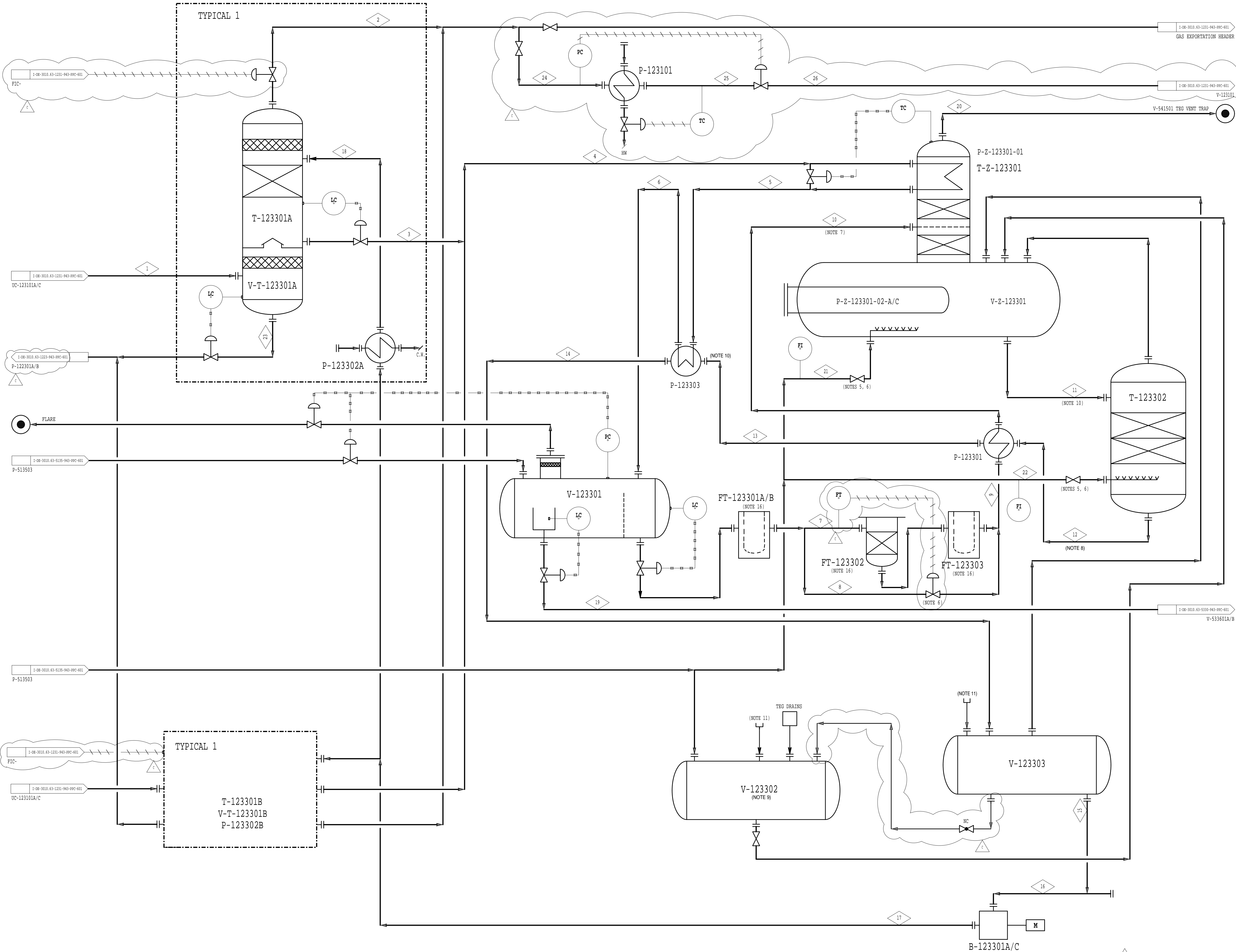


STREAM N.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26			
DESIGN FLOW RATE (kg/h)	105859	105802	2605	5210	5210	5210	1042	4168	5210	5210	5210	5095	5095	5095	5095	5095	5095	2548	24	218	103	103	(NOTE 4)	(NOTE 17)	(NOTE 17)	(NOTE 17)			
OPERATING TEMPERATURE (°C)	37.5	37.5	37.5	42.8	102	102	102	102	160.3	204	204	149	93	48.6	25	37.5	100	102	100	25	25	25	25	38	97.8	40			
OPERATING PRESSURE (kPa abs)	19646	19613	650	650	635	588	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	(NOTE 12)	19741	19643	588	101.3	118	118	19643	19643	19574	984			
DENSITY (kg/m ³)	206	206	1110	1110	1104	1058	1058	1058	1058	1008	973	973	1020	1067	1067	1067	1067	1100	510	0.652	0.9	0.9	993	196	141	7.8			
NOTES:																													



REFERENCE DOCUMENTS			
EQUIPMENT			
TAG	DESCRIPTION	TYPE	CAPACITY
T-123301A/B (2x50%)	TEG CONTACTOR	PACKING	3000000m ³ /d (NOTE 13)
V-T-123301A/B (2x50%)	TEG CONTACTOR K.O.DRUM	VERTICAL	3000000m ³ /d (NOTE 13)
T-123302 (1x100%)	SPARGER COLUMN	PACKING	5.2 m ³ /h (NOTE 14)
V-123301 (1x100%)	TEG FLASH DRUM	HORIZONTAL	30.0 m ³
P-123301 (1x100%)	HOT TEG x TEG HEAT EXCHANGER	SHELL AND TUBE	0.241 x 10 ⁶ W
P-123302A/B (2x50%)	TEG COOLER	SHELL AND TUBE	0.078 x 10 ⁶ W
P-123303 (1x100%)	COLD TEG x TEG HEAT EXCHANGER	SHELL AND TUBE	0.216 x 10 ⁶ W
FT-123301A/B (2x100%)	PRIMARY TEG CARTRIDGE FILTER	CARTRIDGE	4.9 m ³ /h (NOTE 14)
FT-123302 (1x100%)	TEG CHARCOAL FILTER	CHARCOAL	1.0 m ³ /h (NOTE 14)
FT-123303 (1x100%)	SECONDARY TEG CARTRIDGE FILTER	CARTRIDGE	1.0 m ³ /h (NOTE 14)
B-123301A/C (3x50%)	TEG CIRCULATION PUMP	RECIPROCATING	2.4 m ³ /h (NOTE 14)
V-Z-123301 (1x100%)	TEG RECONCENTRATOR	HORIZONTAL	-
T-Z-123301 (1x100%)	TEG REGENERATION UNIT STRIPPER	PACKING	-
P-Z-123301-01 (1x100%)	TEG REGENERATION UNIT CONDENSER	COIL	0.018 x 10 ⁶ W
P-Z-123301-02A/C (3x50%)	TEG REGENERATION UNIT REBOILER	ELECTRICAL HEATER	420 kW
V-123303 (1x100%)	TEG SURGE DRUM	HORIZONTAL	-
P-123101 (1x100%)	GAS RECYCLE HEATER	SHELL AND TUBE	2.33x10 ⁶ W
Z-123301 (1x100%)	TEG REGENERATION UNIT	-	-

- GENERAL NOTES**
- THE MASS BALANCE REFERS TO 2 (TWO) TEG CONTACTORS, EACH OPERATING AT 3.000.000 m³/d OF GAS.
 - COMPOSITION OF GAS TO BE DEHYDRATED IS:


COMPONENT	MOL %	COMPONENT	MOL %	COMPONENT	MOL %
C1	85.9384	C6	0.4334	N ₂	0.1371
C2	4.5338	C7	0.1238	MW	20.4
C3	4.0733	C8	0.0176		
i-C4	0.7713	C9	0.0011		
n-C4	2.0019	C10	0.0001		
i-C5	0.6812	H ₂ O	SATURATED		
nC5	0.7332	CO ₂	0.4941		
 - GAS TO BE DEHYDRATED TO FOLLOWING DEW POINT: -15°C AT 19715 kPa abs.
 - CONDENSATE (NOT CONSIDERED IN THE MASS BALANCE).
 - INJECTION OF STRIPPING GAS IS CONTINUOUSLY IN OPERATION.
 - FLOW RATING CONTROLLER.
 - RICH TEG: 96.9% (WEIGHT PERCENTAGE).
 - LEAN TEG: 99.9% (WEIGHT PERCENTAGE).
 - V-123302 TO BE LOCATED BELOW THE OTHER EQUIPMENT OF THE SYSTEM, TO ALLOW DRAINING BY GRAVITY.
 - GRAVITY FLOW.
 - CONNECTION FOR FILLING BY PNEUMATIC PUMP. A 1 1/2" PIPE SHALL BE PROVIDE FROM DRUMS AREA , IN ORDER TO ALLOW FILL THE UNIT WITHOUT DRUMS TRANSPORTATION IN PROCESS PLANT.
 - TO BE DEFINED DURING DETAILING DESIGN, REGARDING THAT OPERATION PRESSURE OF V-123301 SHALL BE 588 kPa abs.
 - FLOW MEASURED AT 20°C AND 101.3 kPa abs.
 - FLOW MEASURED AT OPERATING CONDITIONS.
 - THE PERFORMANCE CHARACTERISTICS OF EQUIPMENT AND SYSTEMS, AS SHOWN IN THE TABLE ABOVE, ARE DESIGN DATA AND MAY NOT AGREE WITH THE BALANCE INFORMATION HEREUNDER.
 - THE FILTERS SHALL BE DESIGNED TO OPERATE (WHEN DIRTY) UP TO A MAXIMUM DIFFERENTIAL PRESSURE OF:

FT-123301A/B	P=196 kPa
FT-123302	P=49 kPa
FT-123303	P=49 kPa
 - DISCONTINUOUS CONSUMPTION NOT CONSIDERED IN THE MASS BALANCE: P-123101 - 42323 kg/h

C	RELEASED BY PETROBRAS. REVISED WHERE INDICATED.	21NOV02	CLAUDIA	ZARATTINI	ZARATTINI
B	REVISION DUE TO CONSISTENCY VERIFICATION	10DEC01	EBP	MAURO	MAURO
A	GENERAL REVISION - APPROVED BY UN-RIO	23NOV01	EBP	MAURO	MAURO
0	ORIGINAL	11OCT01	EBP	MAURO	MAURO
REV.	DESCRIPTION	DATE	EXEC.	CHECK	APPROV.

THE DATA OR PART THEREOF ARE PETROBRAS PROPERTY AND THUS MUST NOT BE USED IN ANY WAY WITHOUT PERMISSION

I-DE-3010.63-1233-943-PPC-601_C_PID

 PETROBRAS		CENPES					
CLIENT OR USER							
UN-RIO / ATP-MLS							
JOB OR PROJECT							
MARLIM SUL FIELD DEVELOPMENT							
AREA OR UNIT							
UNIT P-51							
TITLE							
PROCESS FLOW DIAGRAM GAS DEHYDRATION SYSTEM							
DESIGN	CENPES	DRAWN	EBP	CHECK	MAURO	APPROVAL	MAURO
SCALE	NO SCALE	SIZE	A1: 841x594mm	CC	600659	SHEET	01 of 01
DATE	11OCT01	No.	I-DE-3010.63-1233-943-PPC-601				