

REFERENCE DOCUMENTS

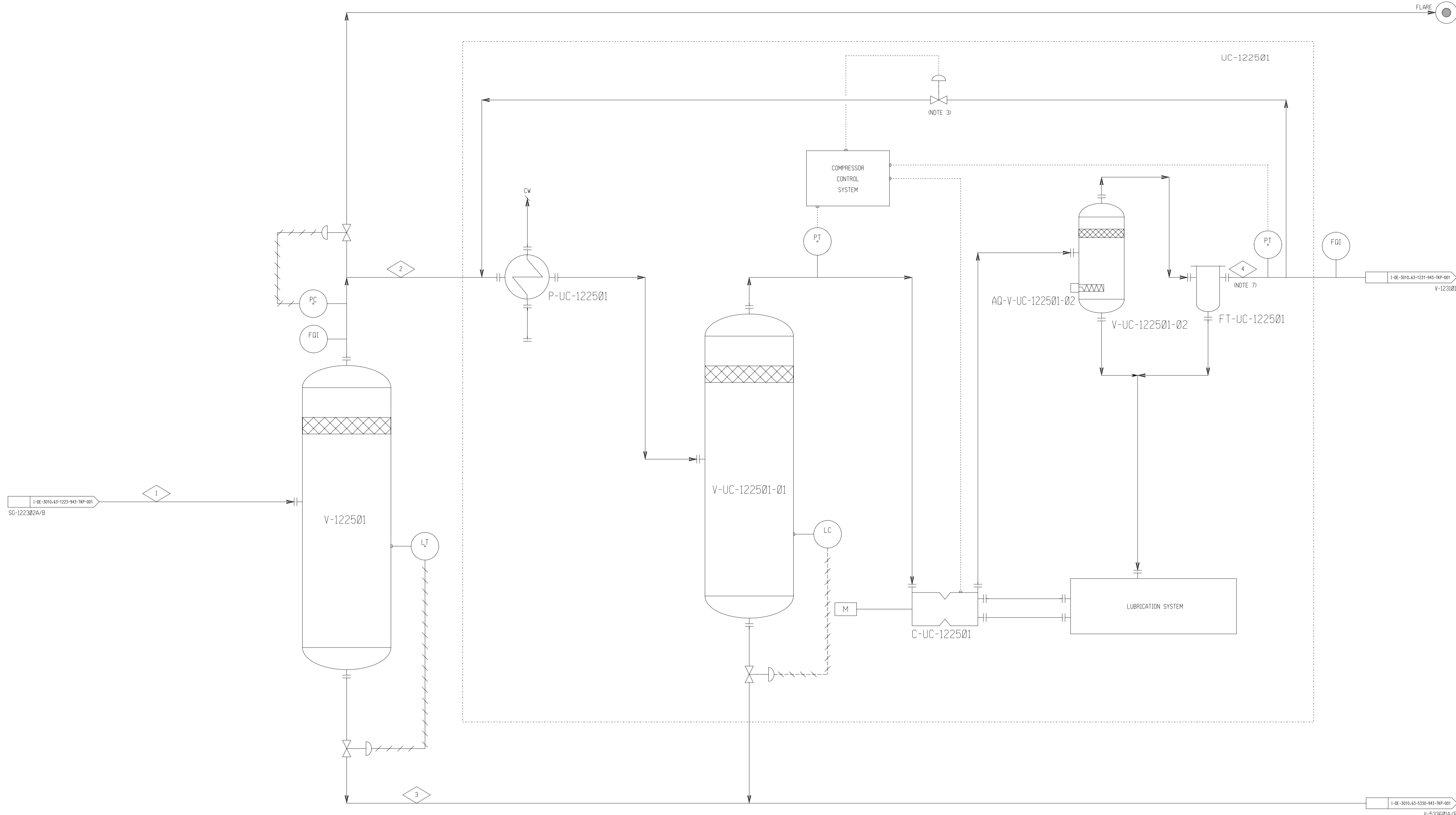
I-ET-3000.00-1200-941-PPC-002 - REV. C - SYMBOLS AND ABBREVIATIONS
 I-DE-3010.63-1200-944-TKP-001 - GENERAL NOTES
 I-DE-3010.63-1225-943-PPC-601 - REV. C - GAS BOOSTER COMPRESSION

EQUIPMENT

TAG	DESCRIPTION	TYPE	CAPACITY (NOTE 2)
V-122501 (1x100%)	GAS BOOSTER K.O. DRUM	VERTICAL	120000 m ³ /d
C-UC-122501 (1x100%)	GAS BOOSTER UNIT COMPRESSOR	SCREW	120000 m ³ /d
V-UC-122501-01 (1x100%)	GAS BOOSTER SUCTION K.O. DRUM	VERTICAL	120000 m ³ /d
UC-122501 (1x100%)	GAS BOOSTER COMPRESSION UNIT	-	120000 m ³ /d
P-UC-122501 (1x100%)	GAS BOOSTER COMPRESSION COOLER	SHELL AND TUBE	HOLD (NOTE 9)
V-UC-122501-02 (1x100%)	GAS BOOSTER K.O. DRUM	VERTICAL	120000 m ³ /d
FT-UC-122501 (1x100%)	GAS BOOSTER FILTER	COALESCER	120000 m ³ /d
AQ-V-UC-122501-02 (1x100%)	GAS BOOSTER COMPRESSION K.O. DRUM OIL HEATER	ELECTRICAL HEATER	HOLD (NOTE 9)

GENERAL NOTES

- 1 - GAS FLOW RATE AT PRESSURE AND TEMPERATURE OPERATION CONDITIONS.
- 2 - GAS CAPACITY AT 20°C AND 101.3 kPa abs.
- 3 - RECIRCULATION TO PERFORM CONTROL WHEN GAS FLOW IS BELOW 10% COMPRESSOR CAPACITY.
- 4 - OIL VOLUMETRIC FLOW RATE AND OIL DENSITY ARE THE ACTUAL VALUES IN DRY BASIS.
- 5 - CHARACTERISTICS OF FRACTIONS:
 C12 - FROM 3-MLS-2RJS: PM= 654, API=16,5
 C20 - FROM 4-RJS-0442: PM= 479, API=6,7
- 6 - MASS AND ENERGY BALANCE REFERS TO YEAR 2007 (MAXIMUM OIL/GAS).
- 7 - THIS TEMPERATURE WAS ESTIMATED AS 100°C. IT SHALL BE CONFIRMED BY GAS BOOSTER VENDOR
- 8 - TO BE CONSIDERED OIL CARRYOVER, AT GAS BOOSTER PACKAGE INLET, FOR AN ESTIMATED FLOWRATE OF 400 L/DAY.
- 9 - TO BE DEFINED BY GAS BOOSTER VENDOR



STREAM CHARACTERISTICS COMPOSITION (% MOLAL) AND FLOW RATES	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	27	28	29	30
WATER	12.97	12.97	0.00	12.97																										
NITROGEN	0.05	0.05	0.00	0.05																										
CARBON DIOXIDE	0.53	0.53	0.00	0.53																										
METHANE	59.15	59.15	0.00	59.15																										
ETHANE	6.90	6.90	0.00	6.90																										
PROPANE	8.11	8.11	0.00	8.11																										
I-BUTANE	1.63	1.63	0.00	1.63																										
N-BUTANE	4.30	4.30	0.00	4.30																										
I-PENTANE	1.51	1.51	0.00	1.51																										
N-PENTANE	1.64	1.64	0.00	1.64																										
N-HEXANE	1.35	1.35	0.00	1.35																										
N-HEPTANE	0.97	0.97	0.00	0.97																										
N-OCTANE	0.59	0.59	0.00	0.59																										
N-NONANE	0.19	0.19	0.00	0.19																										
N-DECANE	0.08	0.08	0.00	0.08																										
N-UNDECANE	0.03	0.03	0.00	0.03																										
N-DODECANE	0.00	0.00	0.00	0.00																										
N-TRIDECANE	0.00	0.00	0.00	0.00																										
N-TETRADECANE	0.00	0.00	0.00	0.00																										
N-PENTADECANE	0.00	0.00	0.00	0.00																										
N-HEXADECANE	0.00	0.00	0.00	0.00																										
N-HEPTADECANE	0.00	0.00	0.00	0.00																										
N-OCTADECANE	0.00	0.00	0.00	0.00																										
N-NONADECANE	0.00	0.00	0.00	0.00																										
C12* (NOTE 5) 3-MLS-2-RJS	0.00	0.00	0.00	0.00																										
C20* (NOTE 5) 4-RJS-0442	0.00	0.00	0.00	0.00																										
TOTAL	100.00	100.00	100.00	100.00																										
MOLAR FLOW RATE (kgmol/h)	138.3	138.3	0.00	138.3																										
MASS FLOW RATE (kg/h)	3688	3688	0.00	3688																										
OIL VOLUMETRIC FLOW RATE (NOTE 4) (m ³ /h)	0.00	0.00	0.00	0.00																										
GAS VOLUMETRIC FLOW RATE (NOTE 1) (m ³ /h)	3239	3239	0.00	576.0																										
WATER VOLUMETRIC FLOW RATE (m ³ /h)	0.00	0.00	0.00	0.00																										
MOLECULAR WEIGHT (kg/kgmol)	26.7	26.7	-	26.7																										
PRESSURE (kPa abs)	118	118	-	980.3																										
TEMPERATURE (°C)	60	60	-	100																										
OIL DENSITY (NOTE 4) (kg/m ³)	0.00	0.00	0.00	0.00																										

Figura 2.4-12 - Planta P&I's do Sistema Booster de Compressão de Gás

0	FOR PNBV COMMENT	21/JAN/05	AMARINS	RSAMPAIO	RBARROSO
REV.	DESCRIPTION	DATE	EXEC.	CHECK	APPROV.
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				TRP Nº: 1 B20257-T00T-PFD-1225-001 CONTRACT Nº: 1 899.2.010.03-9 TECHNICAL RESP: Roberto Jourdan Aguiar INTXSSZ RAIG	
				ENGENHARIA / IEMS	
CLIENT OR USER: UN - RIO / ATP - MLS					
JOB OR PROJECT: MARLIM SUL FIELD DEVELOPMENT					
AREA OR UNIT: PETROBRAS 51 (P-51)					
TITLE: PROCESS FLOW DIAGRAM GAS BOOSTER COMPRESSION					
DESIGN BY: TKP	DRAWN BY: AMARINS	CHECKED BY: RSAMPAIO	APPROVED BY: RBARROSO		
SCALE: NO SCALE	DRAWING TYPE: A1	CC:	SHEET 1 of 1		
DATE: 21/JAN/05	PB Nº: 1	I-DE-3010.63-1225-943-TKP-001			