MEI Project: 10910 – I:\10910\PID\PH-ME-P-0161-001.DWG 21OCT08 0611 SF 25.40 IMP JKELLE

23-XX-9105
1ST STAGE SUCTION/DISCHARGE COOLER SKID

23-VG-91C2
2ND STAGE SUCTION SCRUBBER
SIZE: 2.7M I.D. x 4.5M T/T
DESIGN: 30 BARG AT 140°C/-46°C
OPERATING: 11.1 BARG AT 25.6°C
STEAMOUT: 10 BARG/FULL VAC AT 185°C
MATERIAL: 22CrDUPLEX

HP FLARE HEADER
PH-ME-P-0268-002
31B

0600-VF-31L92649-AS23-0
0600-VF-31L92812-AS23-0 (NOTE 5)
0600-VF-31L92651-AS23-0 (NOTE 5)

4L6 CV FAILURE SET AT 30 BARG
23 PSV 92627
23 PSV 92628
0075 GTBD0R 23-V-99466
0075 GTBD0R 23-V-99467
0600 BLBD3FR
(NOTE 1) 23 HV 92627-03
(NOTE 1) 23 HV 92628-03
0400-PV-23L91467-BD20-0
0400-PV-23L91466-BD20-0
0600-PV-23L91631-BD23-0
0600-PV-23L91632-BD23-0
0400 CBBD24R 23-V-90373
23 HV 92627-01 (NOTE 1)
23 HV 92628-01 (NOTE 1)
0600x0400
0600x0430

PSD
CCP
E
0600-VF-31L92891-BD23-0
(NOTE 3) 23 HV 92626
23 FO 92626
23 YSV 92626
0800 BLBD3FR
LO
0800x0600
0075 GTBD0R 23-V-99465
YSV131 0600 BD23 BD20
AS23 BD23
31B 23E
ATMOSPHERIC VENT HEADER
AS20 BD20
31C
PH-ME-P-0267-001

0600-PV-23L91395-BD20-0 (NOTE 5)
0600-PV-23L91394-BD20-0

BUY BACK GAS
PH-ME-P-0317-001
0200-GF-42L93515-BS20-0
42B 23B
0200 GTBS10R 42-V-93280
0200 GTBS0R 42-V-93282
42-C-93281
42 XV 92625
XY132 0200 GTBS0R 42-V-93283
42 FO 92625
(NOTE 9)
0200-GF-42L93528-BS20-0

FROM 1ST STAGE DISCHARGE COOLER
PH-ME-P-0160-001
2400-PV-23L91383-BD20-7C
(NOTE 5)
23B
7C 7D N
23B 23C

CCC ZI 92621
CCC PIC 92621
23 ZT 92621
23 PV 92621 (NOTE 13)
(M) HV
2400
(NOTE 6)
23 AE 92627-S1 ISOKINETIC SAMPLE VALVE
2400-PV-23L91382-BD20-7C

(NOTE 8)
MW
2400
(NOTE 5)
(NOTE 8)
(NOTE 8)

0200 BF
0200 GTBD0R 23-V-99470
(NOTE 6)
0200-PV-23L91621-BD20-0
23 AE 92627-S2 ISOKINETIC SAMPLE VALVE

PDI 92622
0200 CBBD1FR 23-V-90373
0200-PV-23L91622-BD20-0
23 PDT 92622
0200 CBBD1FR 23-V-90374
0200-PV-23L91623-BD20-0
0200-PV-23L91624-BD20-0
0200 CBBD1FR 23-V-90375
23 PT 92621
PI 92621
0200 CBBD1FR 23-V-90376
23 PT 92623
PI 92623
0200-PV-23L91625-BD20-0
0200 CBBD1FR 23-V-90377
0200-PV-23L91626-BD20-0

23-VG-9102
TRIM: 0200-PV-23L91599-BD20-4C
(NOTE 14)

0200 CBBD1FR 23-V-90378
0200 CBBD1FR 23-V-90379
0200 CBBD1FR 23-V-90380
0200-PV-23L91627-BD20-4C
0200 CBBD1FR 23-V-90370
0200-PV-23L91628-BD20-0
0200 CBBD1FR 23-V-90371
0200-PV-23L91629-BD20-4C

23 LT 92623-01 RADAR
0075 CBBD1FR 23-V-93608
0200x0075
31C 23E
23 LG 92623-02 MAG
23 LT 92623-02
4 E Y
4C 40 Y
LI 92623 HH LL
P
23 TI 92624
0200

FI 92621
23 FT 92621 (NOTE 2)
P
E
23 ESDV 92621 (NOTE 11)
EV102 0400 BLBD6XR
0200-PL-23L91468-BD20-4C
0400x0200
0230
0400-PL-23L91398-BD20-4C
0200-PL-23L91469-BD20-4C
0200-PL-23L91399-BD20-4C

0400 BLBD4XR 23-V-90382
0400 BLBD4XR 23-V-90383
0400 BLBD4XR 23-V-90384
0400 BLBD4XR 23-V-90385
0400 BLBD4XR 23-V-90386
0400 BLBD4XR 23-V-90387
0400 BLBD4XR 23-V-90388
0400 BLBD4XR 23-V-90389
0400x0150
0150
LV 92621A
LV 92621B
0075 GTBD0R 23-V-99472
0075 GTBD0R 23-V-99473
0075 GTBD0R 23-V-99474
0075 GTBD0R 23-V-99475
0075 GTBD0R 23-V-99476
0075 GTBD0R 23-V-99477
CHBD5R 23-C-90381 (NOTE 4)
BD20 AD20
11C

0200-PL-11L90079-AD20-4C
TO TEG DEHYDRATION SYSTEM
PH-ME-P-0192-005
0400-PL-11L90283-AD20-4C
TO 1ST STAGE/ MULTI-PURPOSE SEPARATORS
PH-ME-P-0126-002

0400 CBBD10R 23-V-90392
0200 CTBD10R 23-V-90390
0200 CTBD10R 23-V-90391 (NOTE 7)
0400-PL-23L91400-BD20-4C
(NOTE 12)
0200-DC-81L96509-BD20-0
0200-DC-81L96508-BD20-0
81E 81B
CLOSED DRAIN
81B
PH-ME-P-0278-001

0200-VA-31L92652-BD20-0
0075-VA-31L92653-BD20-0
0200x0075
0075 CBBD1FR 23-V-90455
0075 CBBD1FR 23-V-90456
ATMOSPHERIC VENT HEADER
31C
AS20 BD20
PH-ME-P-0267-001

0200-PV-23L91607-DS20-0
FROM 2ND STAGE COMPRESSOR SKID
PH-ME-P-0164-001

TO 2ND STAGE COMPRESSOR
2400-PV-23L91393-BD20-7C
PH-ME-P-0162-001
7C 7D N
(NOTE 5)
23E

TO CCP-9102
PH-ME-P-0162-001
23E

CONT. ON PH-ME-P-0160-001

SKID LIMITS

FROM NGL STABILIZER
PH-ME-P-0226-001
0800-PV-23L91463-BD22-0
13A
BD22 BD20
(NOTE 10)

FROM TEG INLET SCRUBBER
PH-ME-P-0191-001
0600-PL-24L91777-BD20-0
24A

SURGE CONTROL AND RECYCLE FROM 2ND STAGE DISCHARGE COOLER
PH-ME-P-0170-002
1600-PV-23L9142'-BD20-7C
23B
7C 7D N

LIQUID LEVELS FROM BOTTOMHEAD SEAM	
LSHH-92623	1000
LSH-92621	835
LIC-92621	665
LSL-92621	495
LSLL-92623	325

NOTES:
1. KEY INTERLOCKED VALVE.
2. LIQUID ULTRASONIC METER. PROVIDE STRAIGHT RUN OF 10D UPSTREAM AND 5D DOWNSTREAM.
3. KEY LOCKED VALVE.
4. ANTI-SLAM DESIGN.
5. DO NOT POCKET.
6. SPADE & SPACER TYPE. PROVIDE SPADE STAND AT EACH LOCATION TO PREVENT MISPLACING SPADE.
7. N2 AND STEAM INJECTION AT 2" DRAIN VALVE.
8. INTERNALS ILLUSTRATED ARE INCOMPLETE AND NOT TO SCALE. REFER TO VENDOR DWG.'S FOR COMPLETE INTERNAL INFORMATION.
9. MINIMUM 3 METER SEPARATION.
10. HEAVY WALL PIPE FOR NOISE ATTENUATION.
11. LOCATE ESDV AS CLOSE TO THE SCRUBBER AS PRACTICAL.
12. VESSEL SKIRT.
13. ACTUATOR TO HAVE TRAVEL STOP SET AT A POSITION EQUIVALENT TO CV=1000 (TO LIMIT CLOSURE).
14. 4C INSULATION IS NOT REQUIRED ON TRIM IN VAPOR SERVICE.

REV	DATE	BY	DESCRIPTION	CHK	ENGR	APPR	CLIENT
2	15OCT08	JDK	RE-ISSUED FOR CONSTRUCTION	RAK	RK/PS/JL	RAB	
1	09MAY08	JDK	RE-ISSUED FOR CONSTRUCTION	RAK	JC/PS/JL	SVS	
0	01OCT07	JDK	ISSUED FOR CONSTRUCTION	JTG	JC/ES/JB	SVS	

Wood Group Engineering (North Sea) Ltd.
MUSTANG INTERNATIONAL, LP
HOUSTON, TEXAS
PROJECT NO. 10910

bp

VALHALL
RE-DEVELOPMENT PROJECT
PIPING & INSTRUMENT DIAGRAM
2ND STAGE SUCTION SCRUBBER

REGISTRATION CODES			DRAWING NO.					SCALE
AREA	SYSTEM	TYPE	FACILITY CODE	ORIG.	DISP.	SEQ. No.	SHEET	NONE
T33-02	23	XB	PH	ME	P	0161	001	REV. 2

Field for file specification
Field for date and time !