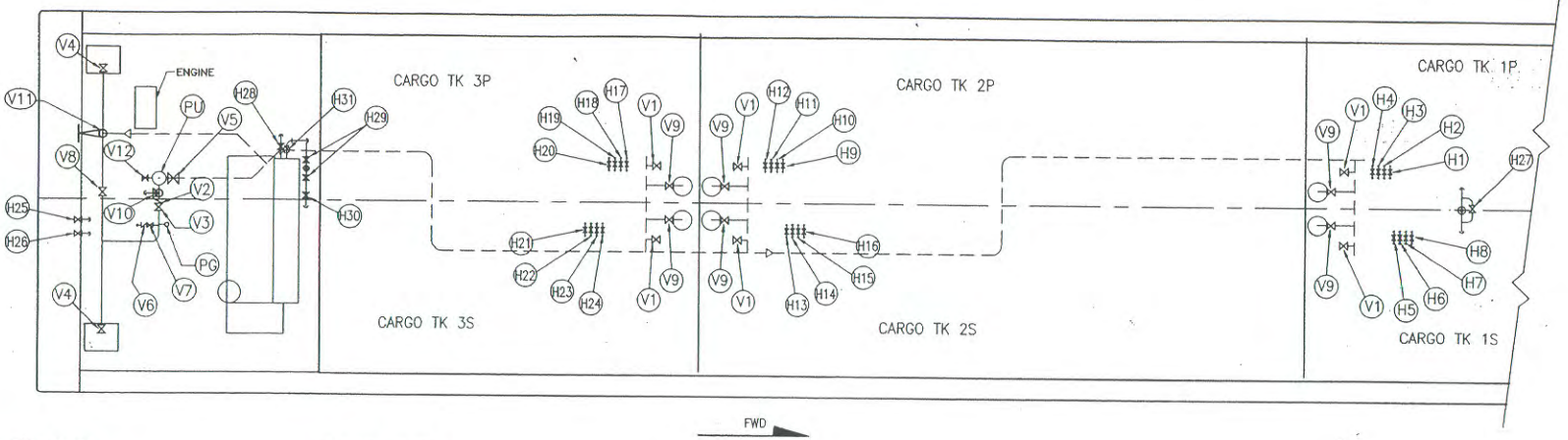


FWD

PLAN

1/8" = 1'-0"

VALVE IDENTIFICATION CHART

V1 HIGH LOADING VALVE
V2 PUMP DISCHARGE CHECK VALVE
V3 PUMP DISCHARGE VALVE
V4 CARGO HEADER VALVE
V5 PUMPWELL INLET VALVE
V6 DRAIN VALVE CHECK ⚠
V7 DRAIN VALVE
V8 CARGO HDR BLOCK VALVE
V9 CARGO TANK SUCTION VALVE
V10 CARGO PRESS. RELIEF VALVE
V11 CARGO HDR LOADING VALVE
V12 PUMPWELL DRAIN VALVE ⚠
PG PRESS GUAGE

TO LOAD

OPEN: V1,V9,V11
CLOSE V5, V3 & V7
OPEN: V4 TO DOCK
OPEN: V8 IF NECESSARY

TO PUMP

OPEN: V9,V5 AND V3
CLOSE V11 & V1
OPEN: V4 TO DOCK
OPEN: V8 IF NECESSARY

HOT OIL SYSTEM:

H1 #1 PORT HOT OIL SUPPLY VALVE – LOWER
H2 #1 PORT HOT OIL SUPPLY VALVE – UPPER
H3 #1 STBD HOT OIL SUPPLY VALVE – LOWER
H4 #1 STBD HOT OIL SUPPLY VALVE – UPPER
H5 #1 PORT HOT OIL RETURN VALVE – LOWER
H6 #1 PORT HOT OIL RETURN VALVE – UPPER
H7 #1 STBD HOT OIL RETURN VALVE – LOWER
H8 #1 STBD HOT OIL RETURN VALVE – UPPER
H9 #2 PORT HOT OIL SUPPLY VALVE – LOWER
H10 #2 PORT HOT OIL SUPPLY VALVE – UPPER
H11 #2 STBD HOT OIL SUPPLY VALVE – LOWER
H12 #2 STBD HOT OIL SUPPLY VALVE – UPPER
H13 #2 PORT HOT OIL RETURN VALVE – LOWER
H14 #2 PORT HOT OIL RETURN VALVE – UPPER
H15 #2 STBD HOT OIL RETURN VALVE – LOWER
H16 #2 STBD HOT OIL RETURN VALVE – UPPER
H17 #3 STBD HOT OIL SUPPLY VALVE – UPPER
H18 #3 STBD HOT OIL SUPPLY VALVE – LOWER
H19 #3 PORT HOT OIL SUPPLY VALVE – UPPER
H20 #3 PORT HOT OIL SUPPLY VALVE – LOWER
H21 #3 PORT HOT OIL RETURN VALVE – LOWER
H22 #3 PORT HOT OIL RETURN VALVE – UPPER
H23 #3 STBD HOT OIL RETURN VALVE – UPPER
H24 #3 STBD HOT OIL RETURN VALVE – LOWER
H25 HOT OIL SUPPLY CONNECTION
H26 HOT OIL RETURN CONNECTION
H27 HOT OIL BY-PASS
H28 HOT OIL SUPPLY VALVE ⚠
H29 HOT OIL STRAINER ISOLATION VALVES ⚠
H30 HOT OIL RETURN BLOCK VALVE ⚠
H31 HOT OIL SUPPLY/RETURN BYPASS VALVE ⚠

⚠ TANK VOL. 100% FULL

TANK	GAL.	BBL.	CU. FT.
1P	191,893	4,569	25,652
1S	191,893	4,569	25,652
2P	187,449	4,463	25,058
2S	187,449	4,463	25,058
3P	177,412	4,224	23,717
3S	177,412	4,224	23,717
TOTAL	1,113,508	26,512	148,854
		98% FULL 25,982	

⚠ CAPACITIES–SHORT TONS AT VARIOUS DRAFTS

DRAFT (FT)	TOTAL (S.T.)	TANK NUMBER 1 P/S	2 P/S	3 P/S
2.0	42.60	13.60	13.30	15.70
2.5	277.10	94.70	92.90	89.50
3.0	512.70	176.80	173.30	162.60
3.5	749.10	259.60	254.60	234.90
4.0	986.50	343.20	336.60	306.70
4.5	1224.60	427.50	419.30	377.80
5.0	1463.50	512.50	502.70	448.30
5.5	1703.20	598.30	586.90	518.00
6.0	1943.80	684.90	671.80	587.10
6.5	2185.30	772.20	757.60	655.50
7.0	2427.50	860.20	844.00	723.30
7.5	2670.60	949.10	931.20	790.30
8.0	2914.50	1038.70	1019.20	856.60
8.5	3159.20	1128.90	1107.80	922.50
9.0	3404.70	1220.10	1197.30	987.30
9.5	3651.00	1311.90	1287.50	1051.60
10.0	3898.10	1404.50	1378.40	1115.20
10.5	4146.10	1497.90	1470.10	1178.10
11.0	4395.00	1592.10	1562.70	1240.20
11.5	4644.70	1687.10	1656.00	1301.60
MAX CAPACITY – BBL (100%)				
	26514.56	9630.92	9453.38	7430.26
MAX CAPACITY – CU. FT. (100%)				
	148,868.58	54073.74	53076.92	41717.90

⚠ SPECIAL FEATURES

1. CARGO PUMP: BYRON JACKSON MODEL 12LS16GHC AMARILLO GEAR 1:1 RATIO 2800 GPM, 237' TDH @ 207 H.P.
2. CARGO PUMP ENGINE: DETROIT DIESEL MODEL 8V-71 NA

⚠ BARGE INFORMATION

HULL NO.	4402	4403
NAME:	CBC 336	CBC 337
OFF. #	1119685	1119686

YEAR BUILT: 2001
HULL TYPE: III
CARGO GRADE: B & LOWER
SUBCHAPTER "D" PRODUCTS

REV	ITEM	DESCRIPTION	DATE	BY
3		ADDED CAPACITIES, SPECIAL FEATURES, & BARGE INFO.	5/22/02	MLS
2		ADDED VALVE ID'S FOR V12, H28, H29, H30, & H31 AND ADDED VALVES V6 & V7 THAT WERE DELETED PREVIOUSLY	4/5/02	MLS
1		DELETED VALVES V6 & V7 PER CUST LTR DTD 3/4/01	3/11/02	GWT

REVISIONS

TRINITY MARINE PRODUCTS, INC.
TANK BARGE DIVISION
1400 Tichy Road – Ashland City, Tn. 37015

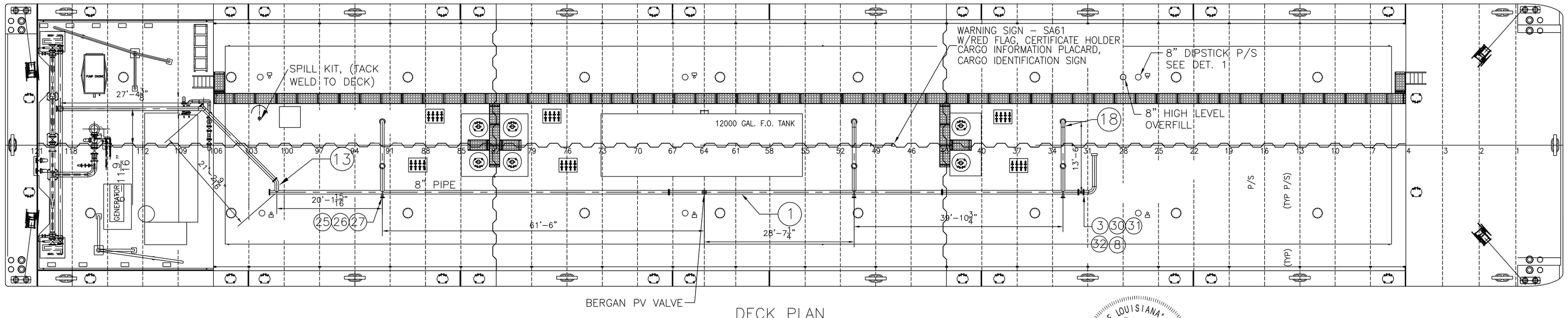
CANAL BARGE COMPANY

297'-0" X 54'-0" X 12'-0" DOUBLE SKIN TANK BARGE

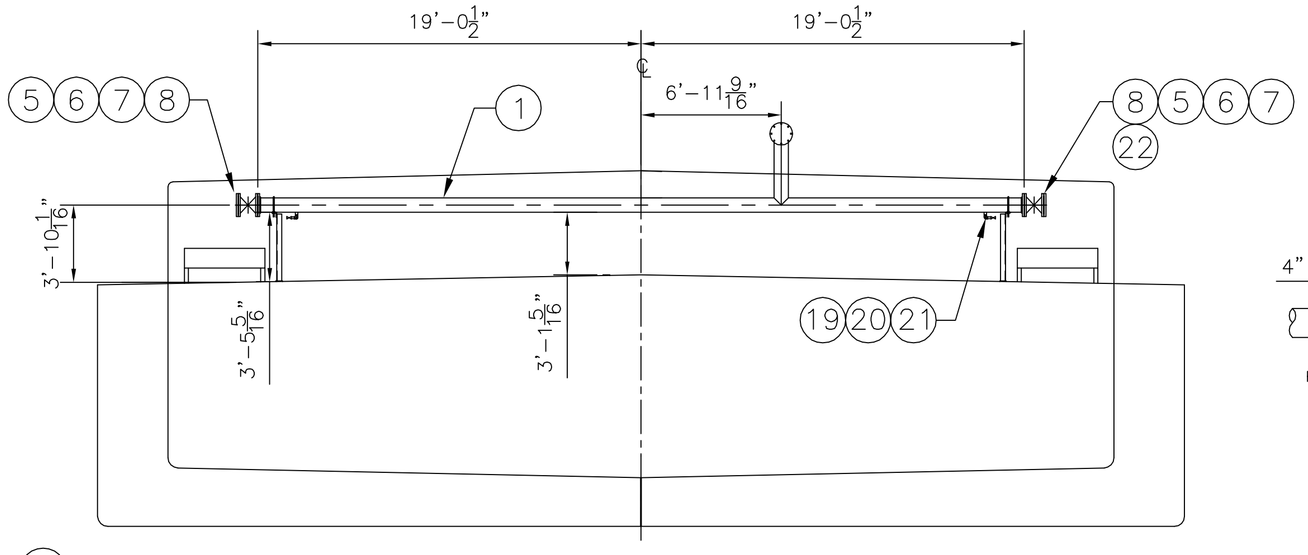
CARGO PIPING DIAGRAM

SCALE: 1/8" = 1'-0"	DATE: 1/29/02		DWG NO. P-1
DRAWN BY: MLS	CK'D BY: BP	APPR BY:	
YARD: ASHLAND CITY		TAG NO. 96056	SHT 1 OF 1
HULL NO. 4402–4403	SHOP ORDER:		REV. 3

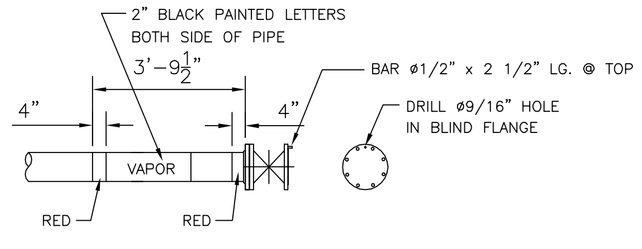
PLOT: 24



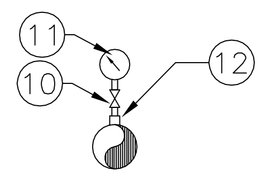
DECK PLAN



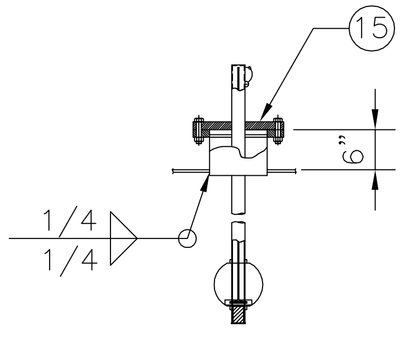
SECTION "A-A"
LOOKING AFT
3/16" = 1'-0"



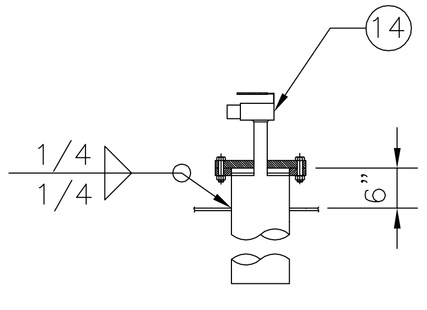
DETAIL "6"
STANDARD VAPOR MARKING
3/8" = 1'-0"



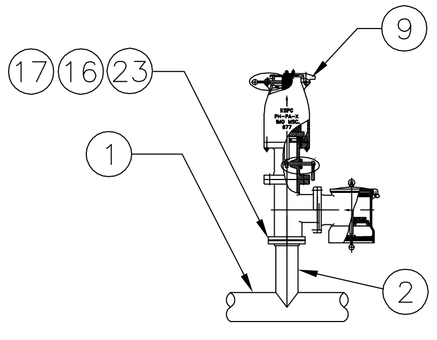
DETAIL "7"
PUMP DISCHARGE PRESSURE GAUGE
NTS



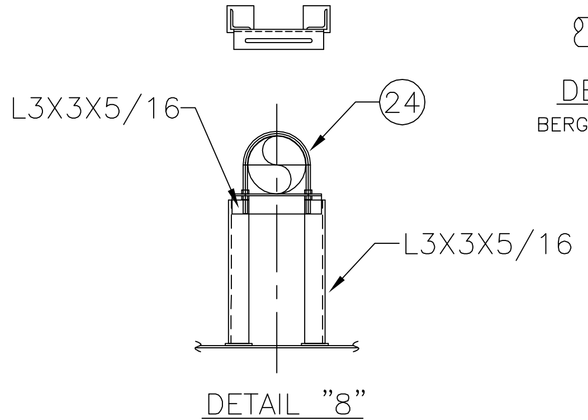
DETAIL "1"
BERGAN FULL DEPTH LIQUID GAUGE
3/4" = 1'-0"



DETAIL "2"
BERGAN HIGH LEVEL/ALARM SHUTDOWN



DETAIL "3"
BERGAN P-V VALVE



DETAIL "8"
8" PIPE SUPPORT

SIGNED ON : 04/10/2012
EXPIRY DATE : 09/30/2012

MARK	QTY	DESCRIPTION	ASTM NO.	ANSI NO.
1	283'	8" PIPE, SCH. 40, ERW, BLK. STEEL	A-53	B36.10
2	4'	6" PIPE, SCH. 20, ERW, BLK. STL.	A-53	B36.10
3	10'	8" PIPE, SCH. 10, 304 SS.	A-312	B36.10
5	5	8" BLIND FLANGE, 150#, R.F., F.S.	A-105	B16.5
6	19	RING GASKET, 1/8" THK., NON-ASBESTOSS, 150# 8" FLG., KLINGERSIL OR EQ.		
7	152	BOLTS, 3/4"ø x 3 1/2" LG. FOR 8" FLG.	A-307	B18.2.1
8	3	GATE VALVE, 8", 150#, C.S. BODY/CR13 TRIM, SPACE#15011C OR EQ	A-216	B16.5
9	1	PV VALVE, 6", BERGAN KLPH-6, SET @ 1.0 PSI PRESS & 0.5 PSI VACUUM	A-216	B16.5
10	1	VALVE, GLOBE, 1/2", SCR'D., FORGED STEEL BODY/CR13 TRIM, VOGT TYPE 600 #10103	A-105	B16.11
11	1	PRESSURE VACCUM GAUGE, 4 PSI VAC. TO 4 PSI PRESS., ASHCROFT OR EQ		
12	1	COUPLING, 1/2", 3000#, SCR'D	A-105	B16.11
13	1	ELBOW, 45°, 8", SCH. 40, L.R., B.W., STEEL	A-234	B16.9
14	6	HIGH LEVEL ALARM/SHUT DOWN SYSTEM, BERGAN GUARD LEVEL 07324TWIN-2A		
15	6	HIGH LEVEL INDICATING DEVISE, BERGAN GUARD LEVEL 07324MDS		
16	1	RING GASKET, 1/8" THK., NON-ASBESTOSS, 150# 6" FLG., KLINGERSIL OR EQ.		
17	8	BOLTS, 3/4"ø x 3 1/4" LG. FOR 6" FLG.	A-307	B18.2.1
18	1	ELBOW, 90°, 8", SCH. 40, B.W.	A-234	B16.9
19	2	VALVE, GATE, 3/4", SCR'D., FORGED STEEL BODY/CR13 TRIM, FAIRBANK FIG#0418	A-105	B16.11
20	2	ELBOW, 90°, 3/4", 3000#, SCR'D, F.S.	A-105	B16.11
21	2	HALF COUPLING, 3/4", 3000#, SCR'D.	A-105	B16.11
22	24	8" FLANGE, 150#, SLIP ON, R.F., F.S.	A-105	B16.5
23	1	6" FLANGE, SLIP-ON, 150#, R.F., F.S.	A-105	B16.5
24	AS REQD	U-BOLT FOR 8" PIPE	A-307	B18.2.1
25	10'	4" PIPE, SCH. 40, ERW, BLK. STEEL	A-53	B36.10
26	6	4" BLIND FLANGE, 150#, R.F., F.S.	A-105	B16.5
27	6	4" FLANGE, 150#, SLIP ON, R.F., F.S.	A-105	B16.5
28	6	RING GASKET, 1/8" THK., NON-ASBESTOSS, 150# 4" FLG., KLINGERSIL OR EQ.		
29	48	BOLTS, 5/8"ø x 3" LG. FOR 4" FLG.	A-307	B18.2.1
30	1	LAP JOINT, 8" SCH. 10, WELDED, 304SS	A-312	B36.10
31	1	STUB FOR 8" LAP JOINT, SCH. 10, WELDED, 304SS	A-312	B36.10
32	1	ELBOW, 90°, 8", SCH. 10, B.W., 304SS	A-182	B16.9

GENERAL NOTES

1. BERGE IS CBC 337, O.N. D1119686.
2. ALL PIPING TO MEET USCG II REGULATIONS.
3. BACKING RINGS SHALL BE USED AT BUTT WELD JOINTS 2" AND LARGER
4. PIPES PASSING THROUGH WATER/OIL TIGHT BOUNDARIES TO BE WELDED BOTH SIDES.
5. VAPOR SYSTEM:
   PRESSURE, WORKING 1.0 PSI
   DESIGN 2.0 PSI
   TEST 2.0 PSI
   RELIEF VALVE 1.0 PSI
6. LABELS TO BE INSTALLED ON ALL VALVES WHERE REQUIRED TO IDENTIFY SERVICE.
7. ENDS OF VAPOR MANIFOLD SHOULD BE PAINTED AS SHOWN IN DETAIL "6" IN ACCORDANCE WITH CFR 46 PART 39.20-D-(d).
8. THE VAPOR PIPING MUST BE ELECTRICALLY CONTINUOUS AND BONDED TO HULL.

REV	ITEM	DESCRIPTION	DATE	BY

REVISIONS

MARINE SOLUTIONS, INC.
7985 BOONE TRACE
NASHVILLE, TN. 37221
TEL: 615-364-9598 FAX: 615-662-9608 E-MAIL: MARINESOLINC@AOL.COM

CANAL BARGE COMPANY, INC.

297'-6" x 54'-0" x 12'-0" DOUBLE SKIN TANK BARGE

VAPOR PIPING ADDITION

SCALE: 3/32"=1'-0"	DATE: 04/10/12		DWG NO. 041201VP-1
DRAWN BY: MSI	CK'D BY:	APPR. BY:	SHT 1 OF 1
HULL NO. 0	CONTRACT NO. 0		REV. 0
			PLOT: 1