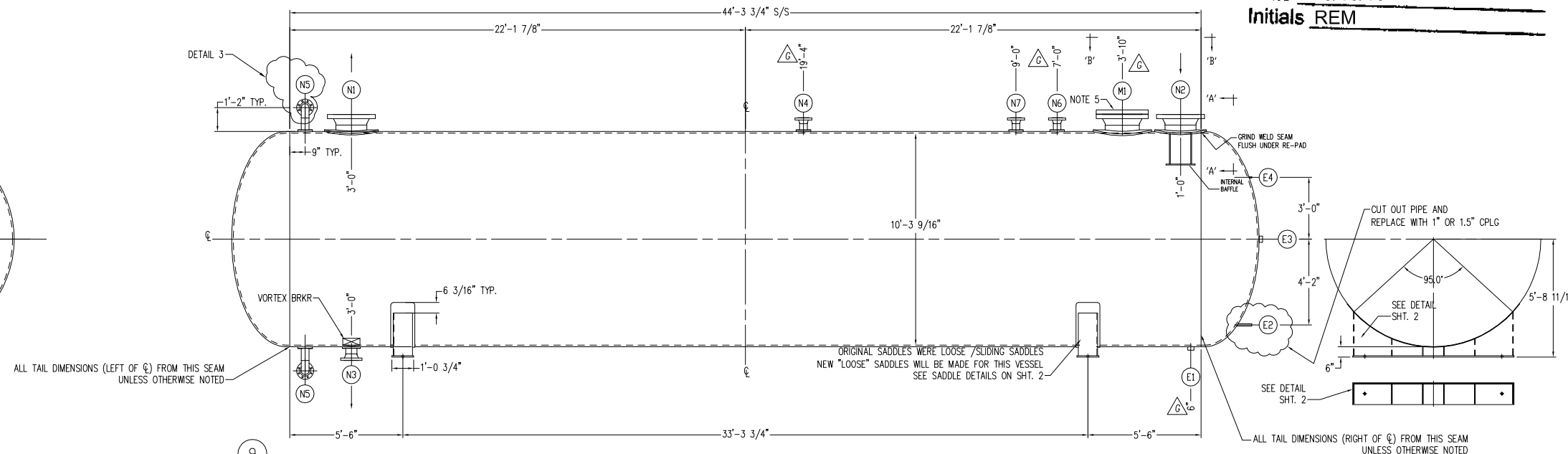


GENERAL NOTES:
 1. DELETED
 2. DELETED
 3. SHIP LOOSE ITEMS TO BE PALETTIZED AND SHRINK WRAPPED WITH ITEM TAG #S
 4. AVOID DIRECT CONTACT WITH ANY TYPE OF LIQUID/CHEMICAL TO GASKET SURFACES.
 5. EXISTING MANWAY BLIND TO BE REPLACED WITH NEW

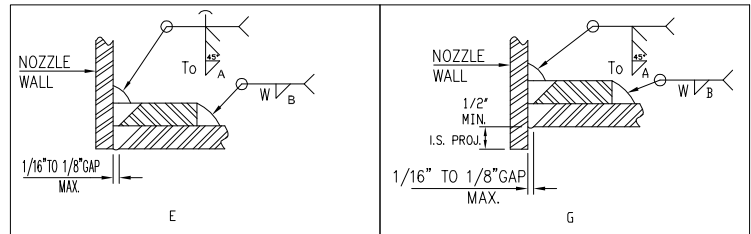
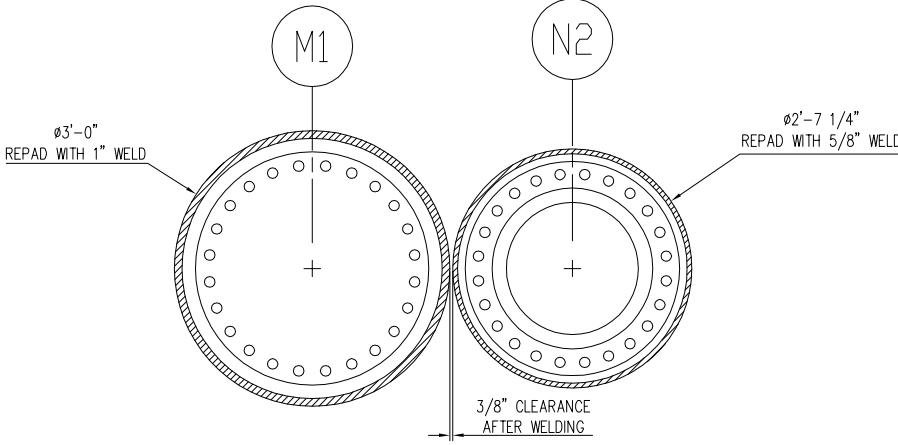
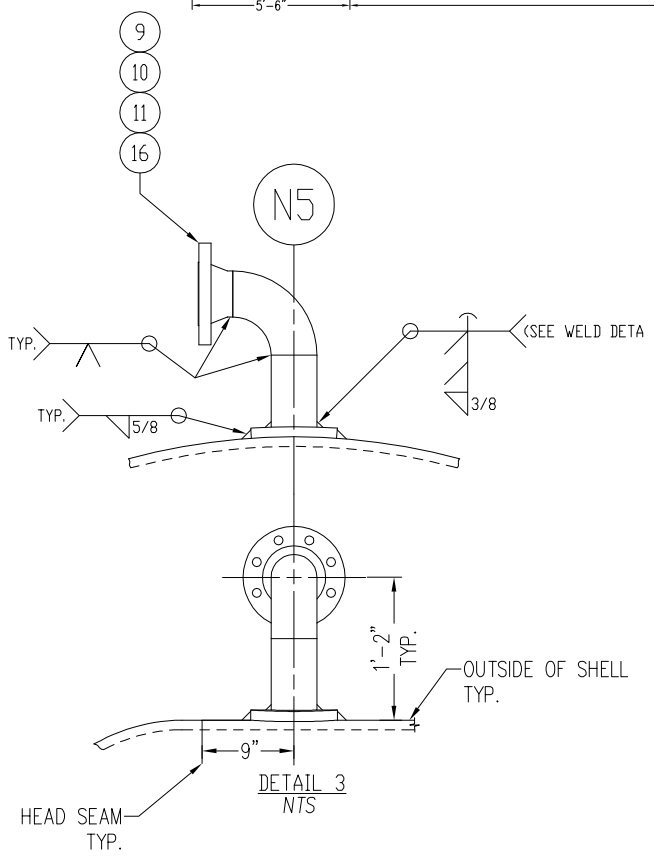
FABRICATION NOTES:
 1. ALL FLANGE BOLT HOLES TO STRADDLE TRUE VESSEL CENTER LINES
 2. CLEAN VESSEL THOROUGHLY AND PROTECT ALL OPENINGS FOR SHIPMENT
 3. LENGTHS SHOWN IN B. D. M. FOR REFERENCE ONLY. DRAWING DIMENSIONS TAKE PRECEDENCE
 4. MINIMUM FILLET WELD SIZES SHALL BE 1/4\"/>



ALL TAIL DIMENSIONS (LEFT OF @) FROM THIS SEAM UNLESS OTHERWISE NOTED

ALL TAIL DIMENSIONS (RIGHT OF @) FROM THIS SEAM UNLESS OTHERWISE NOTED

ORIGINAL SADDLES WERE LOOSE /SLIDING SADDLES
 NEW "LOOSE" SADDLES WILL BE MADE FOR THIS VESSEL
 SEE SADDLE DETAILS ON SHT. 2



MARK	QTY	SIZE	RATE	TYPE	SCH.	SERVICE	OS PRJ.	IS PRJ.	ATT TYPE	THK. / WIDTH	A - B - C	WELD SIZE	FLG	NECK	PAD	COVER	BOLTS	GASKET	OTHER		
M1	1	20	-	WN	-	EXISTING MANWAY	-	-	-	1.00	7.00	.875	1.00	-	-	-	-	-	17	-	-
N7	1	4	300	WN	STD	NEW SERVICE	8	-	E	1.00	2	.375	.625	-	9	10	11	-	-	-	-
N6	1	4	300	WN	STD	NEW SERVICE	8	-	E	1.00	2	.375	.625	-	9	10	11	-	-	-	-
N5	2	4	300	WN	STD	LEVEL BRIDLE	14	-	E	1.00	2	.375	.625	-	9	10	11	-	-	-	16
N4	1	4	300	WN	STD	RELIEF VENT	8	-	E	1.00	2	.375	.625	-	9	10	11	-	-	-	15
N3	1	6	300	WN	STD	NEW SERVICE DRAIN	8	-	E	1.00	2	.375	.625	-	6	7	8	-	-	-	-
N2	1	18	300	WN	STD	NEW SERVICE INLET	10	.500	G	1.00	6.00	.375	.625	.500	3	4	5	-	-	-	-
N1	1	18	300	WN	STD	NEW SERVICE OUTLET	10	.500	G	1.00	6.75	.375	.625	.375	3	4	5	-	-	-	-
E4	1	.375	NPT	CPLG	-	EXISTING SERVICE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E3	1	2.5	NPT	CPLG	-	EXISTING SERVICE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E2	1	.75	NPT	PIPE	-	EXISTING SERVICE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E1	1	2	NPT	CPLG	-	EXISTING SERVICE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SCHEDULE OF OPENINGS

BILL OF MATERIAL

VESSEL INFORMATION:
 (FROM ORIGINAL DATA REPORT / PLATE / STAMPING)

MANUFACTURER: ACF INDUSTRIES, INC.
 YEAR BUILT: 1956
 CONSTRUCTION CODE: ASME
 ADDENDA: 1952
 SERIAL No.: 14-875-6
 VESSEL TAG No.: -
 NATIONAL BOARD No.: 4537
 RADIOGRAPH % / JOINT EFFICIENCY:
 (GIRTH SEAMS) 100% .95
 (LONG SEAMS) 100% .95
 HEAT TREATMENT:
 (GIRTH SEAMS) YES
 (LONG SEAMS) YES
 THICKNESSES:
 (HEADS) 15/16" ELLIP. OR HEMI.
 (SHELL) 15/16"
 CORROSION ALLOWANCE: -
 PRESSURES / TEMPERATURES
 MAWP 250 PSI @ 650 °F
 MDMT - °F @ - PSI
 VACUUM PRESSURE - PSI
 HYDRO TEST PRESSURE 400 PSI
 CONSTRUCTION SAFETY FACTOR - RATIO
 MATERIALS:
 SHELLS: SA-212 GR B
 HEADS: SA-212 GR B
 RE-PADS: -
 FLANGES: -
 PIPE NOZZLES: -
 CAPACITY / WEIGHT & SERVICE
 U.S. GALLONS/WEIGHT 30K 70,000
 ORIGINAL SERVICE PROPANE STORAGE
 NOTES / REMARKS

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REVISIONS	DATE	BY	REFERENCES
G REVISED PER ADDITIONAL COMMENTS	6/16/10	REM	-
F REVISED AND ISSUED FOR FABRICATION APPROVAL	6/11/10	REM	010-154 SHT 2
E REVISED N4 TO 4" NPS	6/10/10	REM	-
D REVISED PER ADDITIONAL COMMENTS AND RESUBMITTED	5/27/10	REM	-
C REVISED PER ADDITIONAL COMMENTS AND RESUBMITTED	5/27/10	REM	-
B REVISED PER CUSTOMER COMMENTS AND RESUBMITTED	5/18/10	REM	-
A ISSUED FOR BID	4/20/10	REM	-

ORIGINAL BILL OF MATERIALS (MAJOR COMPONENTS) PER ORIGINAL DATA REPORT

MK	QTY	MATERIAL	SERVICE	DESCRIPTION
1	1	SA-212 GR B	SHELL	15/16" THK X 533 1/2" WD X 391 1/8" LG (ROLL 123 9/16" ID)
2	2	SA-212 GR B	HEAD	ELLIP X 123 9/16" ID X 15/16" MIN.

BILL OF MATERIALS FOR ALTERATIONS

MK	QTY	MATERIAL	SERVICE	DESCRIPTION
3	2	SA-105	FLANGE	18" CL 300# RFWN X SCH STD. BORE
4	2	SA-106-B	PIPE NECK	18" X SCH STD X 7' LONG BDE
5	2	SA-516-70	RE-PAD	1" THK X 31.5" OD X 18" ID ROLLED TO A 62.718" RADIUS
6	1	SA-105	FLANGE	6" CL 300# RFWN X SCH STD. BORE
7	1	SA-106-B	PIPE NECK	6" X SCH STD X 6' LONG BDE
8	1	SA-516-70	RE-PAD	1" THK X 10.625" OD X 6.625" ID ROLLED TO A 62.718" RADIUS
9	4	SA-105	FLANGE	4" CL 300# RFWN X SCH STD. BORE
10	4	SA-106-B	PIPE NECK	4" X SCH STD X 6' LONG BDE
11	4	SA-516-70	RE-PAD	1" THK X 8.5" OD X 4.5" ID ROLLED TO A 62.718" RADIUS
12/13/14	DELETED			
15	4	SA-36	GUSSET	1/4" X 2" X 6 1/8" LONG (DETAIL 2)
16	2	SA-234-WPB	ELBOW	4" X SCH STD LR 90° ELL.
17	1	SA-105	BLIND	20" CL 300# RF BLIND

1. DESIGN / ALTERATION NOTES: * SIGNIFIES ITEM/S RE-RATED
 DESIGN, FABRICATION, AND INSPECTION TO BE IN ACCORDANCE WITH THE ASME SECTION VIII, DIV.1 & NBIC 2007 CODE WITH LATEST ADD. *R* STAMP REQUIRED
 2. DESIGN DATA: (PER ORIGINAL MANUFACTURERS DATA REPORT)
 DESIGN PRESSURE (INT.) - PSIG @ - °F
 DESIGN PRESSURE (EXT.) - PSIG @ - °F
 MAWP: 250 PSIG LIMITED BY: -
 M.D.M.T - °F @ - PSIG
 CHARPY IMPACT REQUIREMENTS: -

DESIGN LIQUID LEVEL: -
 CORROSION ALLOWANCE: HEADS 0 SHELL 0 NOZZLES 0
 RADIOGRAPHY: RT-1 FOR A JOINT EFF. OF: 100
 SHELL CAT. A: (LONG SEAMS) FULL
 SHELL CAT. B: (CIRC. SEAMS) FULL
 HEAD TO SHELL SEAMS: FULL
 HEAD CAT. A: FULL
 SHOP HYDRO TEST @ 400 PSIG NEW AND COLD (HORIZONTAL POS.)
 P.W.H.T. REQUIRED
 WIND SPEED - EXPOSURE - IMP. -
 SEISMIC -


3. ESTIMATED WEIGHTS & CAPACITY:
 FAB. WEIGHT EMPTY 70,000 LBS FULL H2O - LBS
 ESTIMATED SHIPPING WEIGHT 35 TONS
 CAPACITY 30K US GALLONS

4. MATERIALS OF CONSTRUCTION: (NEW MATERIALS)
 SHELLS: -
 HEADS: -
 RE-PADS: SA-516-70
 FLANGES: SA-105
 PIPE NOZZLES: SA-106-B
 WELD FITTINGS: SA-234-WPB
 STUDS: SA-193-B7
 NUTS: SA-194-2H

5. PREPARATION & PAINT: N/A (INTERNAL)
 SURFACE PREP PRIME COAT INTERMEDIATE COAT TOP COAT (ALUMINUM)
 PREPARATION & PAINT: (EXTERNAL) TEF STD.
 SURFACE PREP PRIME COAT INTERMEDIATE COAT TOP COAT (ALUMINUM)

6. WELDING PROCEDURES:
 HEAD / SHELL: -
 SHELL / SHELL: -
 FLANGE TO PIPE: SMAW/FCAW/GMAW S-1-1-HT,M-1-1-HT,TF-1-1-HT
 NOZZLE NECK TO VESSEL: SMAW/FCAW/GMAW S-1-1-HT,M-1-1-HT,TF-1-1-HT
 COUPLINGS: -
 SUPPORTS: SMAW/FCAW/GMAW S-1-1-HT,M-1-1-HT,TF-1-1-HT
 MISC: GMAW M-1-1-HT

PROJECT / LOCATION: - JOB NO.: - ITEM NO.: -


TOTAL ENERGY FABRICATION, CORP.
 BLACKWELL, OK
 DESCRIPTION: 10'-3 9/16" ID X 44'-3 3/4" S/S HORIZ. VESSEL
 ELEVATION & GENERAL ARRANGMENT
 CUSTOMER: DNECK P.D. NO.: -
 DRAWN BY: REM SCALE: NONE DATE: 4/20/10
 CHECKED BY: SRL DRAWING NO.: -
 APPROVED BY: GAH REV. G
 010-154 SHT. 1 OF 2