

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	3/28/2022	RJ
B	REVISED GROUND LUG LOCATION; ADDED 2ND GROUND LUG; MODIFIED N3 THRU N6; ADDED FLANGE DETAIL	4/7/2022	RJ

APPROVAL DRAWING

APPROVED

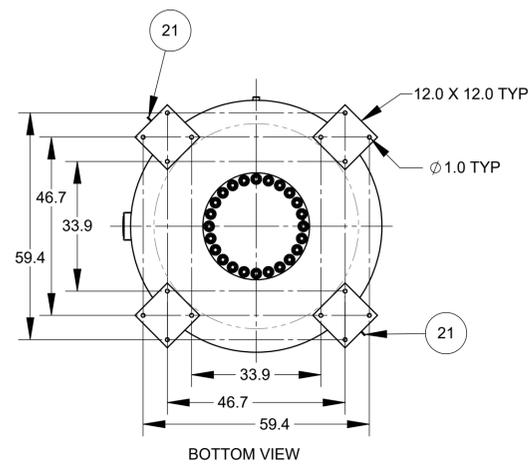
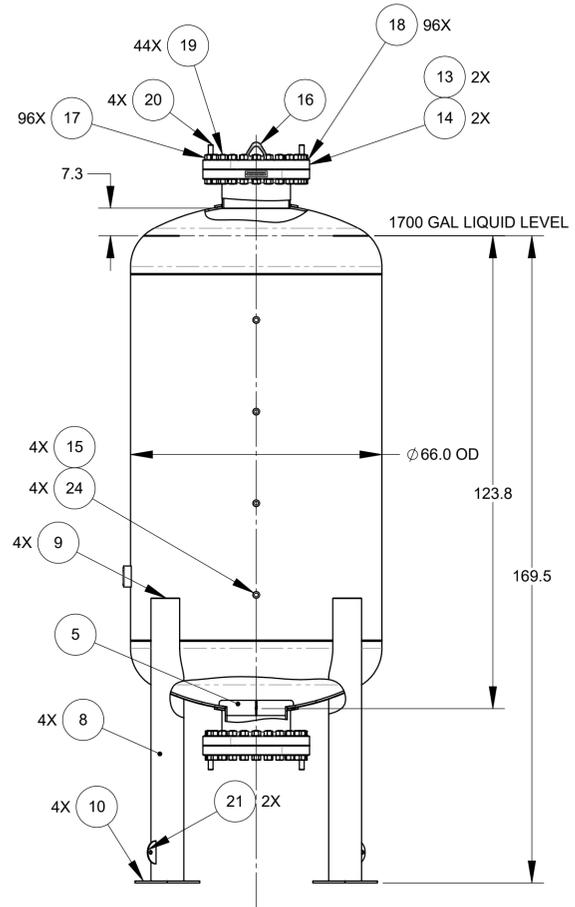
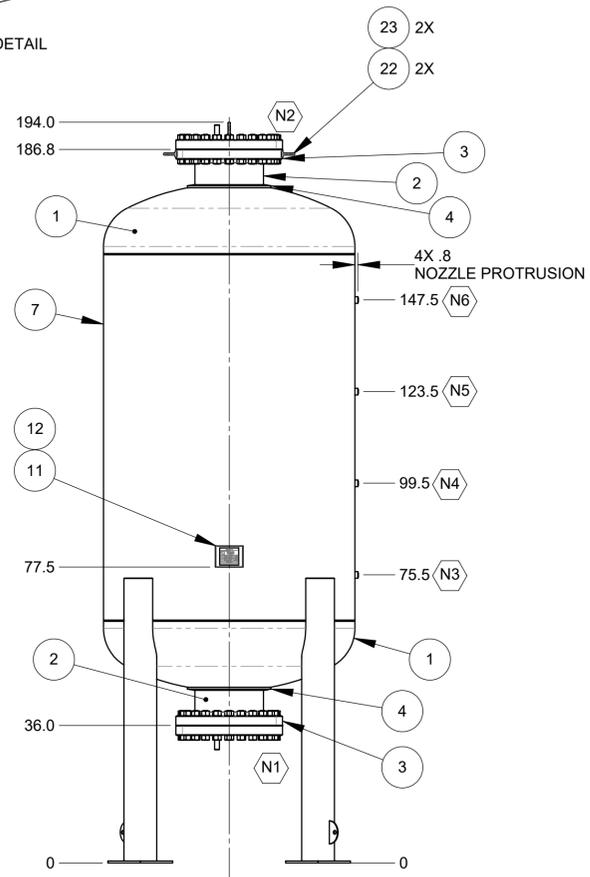
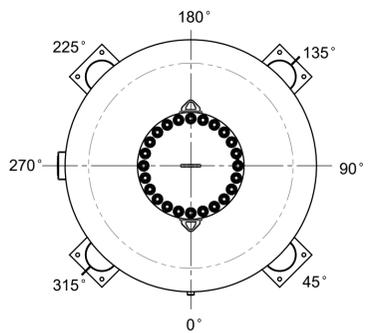
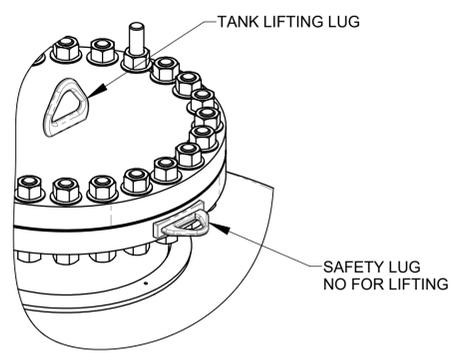
APPROVED AS NOTED

REVISE AS NOTED AND RE-SUBMIT

REJECTED

BY _____

DATE _____



MARK	LOC	DESCRIPTION	SERVICE
N6	SIDE	AS5202 COUPLING, 1-5/16" UN	THERMOWELL
N5	SIDE	AS5202 COUPLING, 1-5/16" UN	THERMOWELL
N4	SIDE	AS5202 COUPLING, 1-5/16" UN	THERMOWELL
N3	SIDE	AS5202 COUPLING, 1-5/16" UN	THERMOWELL
N2	TOP	18"-300# RFSO FLANGE	INLET
N1	BOT	18"-300# RFSO FLANGE	OUTLET

NOZZLE SCHEDULE

N3, N4, N5, N6	QTY.	PART NUMBER	DESCRIPTION	MATERIAL	
24	4	AS5202 COUPLING	AS5202 COUPLING, 1-5/16" UN-2B	SA-479-316L	
23	2	22-047A-107	D-LUG SPACER	AISI 304	
22	2	2-900-LUG	SAFETY LUG	304L SS	
21	2	21-259A-15	GROUND LUG	SA-240-304L	
20	4	26LU34	STUD, THREADED, 1-1/4" X 8 X 18", A193-B8 (CUT TO 10.25")	18-8 SS	
19	44	26LT79	STUD, THREADED, 1-1/4" X 8 X 7-3/4", A193-B8	18-8 SS	
18	96	92141A040	FLAT WASHER, 1-1/4" SCREW	18-8 SS	
17	96	26LU96	NUT, HEX 1-1/4"-8 A194-8M	18-8 SS	
16	1	2-899-MLL	LIFTING LUG	SA-105	
15	4	AS5202 PLUG	AS5202 PLUG, 1-5/16" UN	SA-479-304L	
14	2	18-300-BLIND-RF-FLANGE	18", 300#, RAISED FACE BLIND	SA-105	
13	2	8516T277	18" FULL FACE GASKET,	BUNA-N	
12	1	22-048A-106	ASME CERTIFICATION PLATE	SA-240-304L	
11	1	21-260A-107	NAMEPLATE BRACKET	SA-240-304L	
10	4	21-260A-105	MOUNT PLATE	SA-240-304L	
9	4	21-260A-104	LEG CAP	SA-240-304L	
8	4	21-260A-103	8" SCH 40 PIPE LEG	SA-312-TP304	
7	1	21-260A-101	SHELL	SA-240-304	
5	1	21-260A-400	VORTEX BREAKER	SA-240-304	
4	2	21-260A-301	NOZZLE REPAD	SA-240-304	
N1, N2	3	2	18-300-BLIND-RF-FLANGE	18", 300#, RFSO FLANGE	SA-182-304
	2	2	21-260A-202	NOZZLE NECK	SA-312-TP304
	1	2	21-260A-201	HEAD, ASME 2:1 SEMI-ELLIPTICAL	SA-240-304

BILL OF MATERIALS

- NOTES:
- VESSEL AND/OR HEAT TRANSFER SURFACE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE "ASME BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1, 2021 AND ADDENDA.
 - SPS, INC. SHALL NOT BE RESPONSIBLE FOR THE CORROSION RESISTANCE OF EQUIPMENT OR ANY RESULTING DAMAGES. IT IS THE PURCHASER'S RESPONSIBILITY TO SPECIFY THE INTENDED APPLICATION(S). CONSULTATION WITH QUALIFIED PERSONNEL IN MATERIAL SELECTIONS IS HIGHLY RECOMMENDED.
 - ALL WELDING TO BE DONE BY ASME QUALIFIED WELDERS IN ACCORDANCE WITH UW-28.
 - WELDS SHALL BE NEAT IN APPEARANCE, FREE OF SLAG, UNDERCUT & OTHER DEFECTS.
 - INTERIOR WELDS TO BE GROUND SMOOTH AND FLUSH EXCEPT FOR THE LAST CIRCUMFERENTIAL WELD ON THE TOP HEAD AND NOZZLE; EXTERIOR WELDS TO BE AS WELDED.
 - ASME CODE JURISDICTION ENDS AT THE FIRST SEALING SURFACE EXCLUDING MANWAY.
 - SUITABLE PRESSURE AND/OR VACUUM RELIEF DEVICES MUST BE INSTALLED BY CUSTOMER FOR OPERATION OF VESSEL.
 - ALL CUSTOMER SUPPLIED COMPONENTS MUST HAVE PROPER IDENTIFICATION, APPLICABLE CODE/STD INFORMATION (EX: PARTIAL DATA), AND MILL TEST REPORTS BEFORE BEING WELDED TO VESSEL.
 - VESSEL TO BE HYDROSTATICALLY TESTED PER UG-99. CHECK FOR DEFECTS, REPAIR AND RETEST IF NECESSARY.
 - VESSEL TO BE SHIPPED UNDER 3.5 PSI NITROGEN.
 - NO INSPECTION PORT. USE Ø 18" FOR INTERNAL INSPECTION.
 - SPS TO PERFORM THE FOLLOWING TESTS AND PROCEDURES AND/OR HAVE CERTIFICATIONS.
 - HYDROSTATIC PRESSURE TEST
 - ELECTROPOLISHING AND PASSIVATION
 - BPE CIP COVERAGE TEST
 - BPE DRAINAGE TEST
 - CITRIC ACID PASSIVATION PER SPS SOP
 - BPE SURFACE FINISH TEST
 - MATERIAL CERTS REQUIRED FOR THE FOLLOWING:
 - PRESSURE VESSEL COMPONENTS
 - REMOVABLE ACCESSORIES/WETTED PARTS
 - AGITATOR SEALS
 - ELASTOMERS FOR FERRULES OR VALVE SEATS
 - GASKET MATERIAL, IF APPLICABLE:
 - BUNA
 - EPDM
 - VITON
 - PTFE
 - AS SUPPLIED
 - USP, CLASS VI
 - CURE: Pt PEROXIDE OTHER
 - SEISMIC DESIGN ASSUMES SUPPORTS ARE ANCHORED TO FLOOR.
 - FINISH TO BE: EXTERIOR-120 GRIT JITTERBUG, INTERIOR-180 GRIT JITTERBUG
 - COMPLETED VESSEL TO BE PASSIVATED PER ASTM A967, AMS 2700.
 - INSTALLTION AT CUSTOMER SITE BY OTHERS.

SEISMIC CALCULATION VALUES:
ASCE 7-16

SITE CLASS D
I_e = 1.5
S_s = 60%
S₁ = 24.6%
R = 2.5
F_v = 2
T_l = 12
r_{ho} = 1

RISK CATAGORY 3

WINDAGE CALCULATION VALUES:
ASCE 7-16

C_f = 0.54
115 MPH
K_e = 1
EXPOSURE = C
K_d = 0.95
K_{z1} = 1
RISK CATAGORY 3

2282	
CERTIFIED BY	
SPS STAINLESS PROCESS SYSTEMS	
U	ØSHELL MAWP 200 PSI AT 150 °F
	MDMT -320 °F AT 200 PSI
	JACKET MAWP N/A PSI AT N/A °F
	MDMT N/A °F AT N/A PSI
ØSER. NO. 22-048A-01 YR BILT. 2022	
FUEL RUN TANK	
1700 GAL CAPACITY	

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF STAINLESS PROCESS SYSTEMS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF STAINLESS PROCESS SYSTEMS IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL = 1/32 ANG. MACH = ± 1° BEND = ± 1° XX ± .03 .XXX ± .020 .XXXX ± .010 STOCK SIZE

SEE BOM

SEE BOM

180 GRIT JITTERBUG

NAME: R. JOHNSON DATE: 3/28/2022

CHECKED: M. HYMAN

ENG APP: M. HYMAN

MFG APP:

G.A. PROJECT:

TITLE: 1700 GAL FUEL RUN TANK CUSTOMER SIGN-OFF

SIZE DWG. NO: D 22-048A-01 REV B

SCALE: NONE WEIGHT: SHEET 1 OF 1

VESSEL DESIGN DATA	
CUSTOMER	
P.O. NUMBER	21-260A
DESIGN CODE	ASME SECTION VIII, DIV 1, 2021
MAX ALLOWABLE WORKING PRES - INTERNAL (MAWP)	200 PSI
MAX DESIGN TEMPERATURE (°F)	150 °F
OPERATING PRESSURE	200 PSI
OPERATING TEMPERATURE	100 °F
VACUUM DESIGN (MMHG)	N/A
MIN DESIGN METAL TEMP (MDMT) (°F)	-320 °F
CORROSION ALLOWANCE (IN)	0 IN
SERVICE	NON-LETHAL
APPLICABLE LOADINGS	UG-22(a), (b), &(l)
IMPACT TEST EXEMPTED AS PER	UG-20(f)
HYDROTEST PRESSURE (PSI)	260 PSI
HYDROTEST TEMPERATURE (°F)	50-120 °F
HYDROTEST POSITION	HORIZONTAL
JOINT EFFICIENCY	0.85 EXCEPT SHELL; 0.70 SHELL
WIND PRESSURE	SEE BELOW
SIEMIC ZONE	SEE BELOW
POST WELD HEAT TREATMENT (PWHT)	NONE

VESSEL DIMENSIONAL DATA	
CYLINDRICAL	62" OD X 130.6" LG
EMPTY WEIGHT	5600 LBS
OPERATING WEIGHT	
FULL FLOODED WEIGHT	

HEAT TRANSFER SURFACE DATA	
DIMPLE JACKET	NO
AREA	N/A
DIMPLE PATTERN TYPE	N/A
HEATING MEDIUM	N/A
COOLING MEDIUM	N/A
MAX DESIGN PRESSURE (MAWP)	N/A
MIN DESIGN METAL TEMP (MDMT) (°F)	N/A
JACKET FLOW RATING	N/A

INSULATION DATA	
CHLORIDE FREE	N/A
INSULATED SURFACES TO RECEIVE A 5 MIL. COATING OF THERMALOX	
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NONE

NON-DESTRUCTIVE EXAMINATION	
TOP HEAD	NONE
TOP HEAD TO SHELL	NONE
SHELL LONG SEAM	NONE
BOTTOM HEAD	NONE
BTM HEAD TO SHELL	NONE

PRODUCT DATA	
PROCESS LIQUID	UNKNOWN
VISCOSITY	N/A
SPECIFIC GRAVITY	N/A