VESSEL DESIGN SEISMIC BASE SHEAR (ASD)	5
EMPTY CONDITION	977 lbs.
OPERATING CONDITION	1,465 lbs.

GENERAL NOTES

1. ALL TAIL DIMENSIONS ARE TAKEN FROM WORKLINE UNLESS OTHERWISE NOTED.
2. BOLT HOLES SHALL STRADDLE NORMAL VESSEL CENTERLINES UNLESS OTHERWISE NOTED.
3. VESSEL FABRICATION & DIMENSIONAL TOLERANCES SHALL BE PER THE DESIGN AND CONSTRUCTION CODE AND FIQURES 1 AND 2 OF A8KM-PP-000-50801.
4. ALL PRESSURE CONTAINING MATERIAL SHALL HAVE HEAT NO.'S AND/OR MATERIAL GRADES STENCILED OR MARKED FOR TRACEABILITY.
5. SEE DRAWING 1627-A2 (EN207122-PALLCO-9V3-00006) FOR BILL OF MATERIALS.
6. SEE DRAWING 1627-A3 (EN207122-PALLCO-9V3-00059) FOR WELD & NDE REQ'TS.
7. FOR LIST OF APPLICABLE PROJECT SPECIFICATIONS & STANDARDS, REFER TO DOCUMENT EN207122-PALLCO-9V3-00065. 2

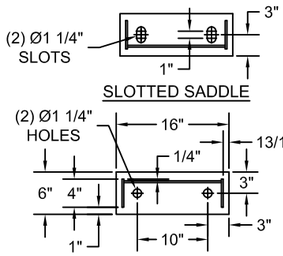
ALLOWABLE NOZZLE LOADS

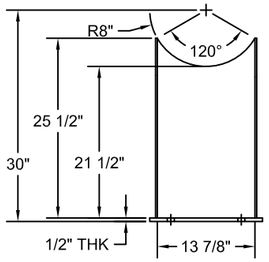
MARK	Pr(lb(f))	Vc(lb(f))	Vl(lb(f))	Mc(lb(f)-ft)	Ml(lb(f)-ft)	Mt(lb(f)-ft)
A	940	710	940	460	600	700
B1	940	710	940	460	600	700
B2	630	470	630	210	270	310
V	630	470	630	210	270	310
D1	630	470	630	210	270	310
D2	630	470	630	210	270	310
P1,P2	630	470	630	210	270	310
P3	630	470	630	210	270	310
R	940	710	940	460	600	700
L1,L2	630	470	630	210	270	310
LT1,LT2	630	470	630	210	270	310 2

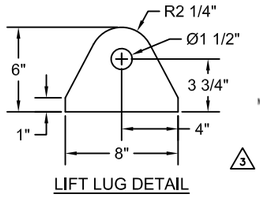
3 FOR HEAD NOZZLE, M RESULTANT: $\sqrt{(Ml^2+Mc^2)}$ & F RESULTANT: $\sqrt{(Fl^2+Fc^2)}$

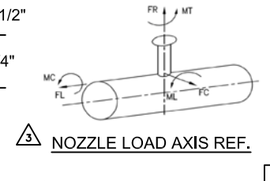
NOZZLE SCHEDULE

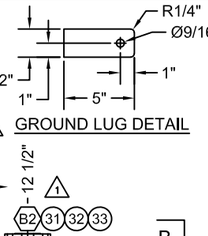
MARK	QTY	SERVICE	SIZE	RATING	TYPE
A	1	INLET	3"	300#	RFLWN
B1	1	WATER OUTLET	3"	300#	RFLWN
B2	1	SLOP OIL OUTLET	2"	300#	1 RFWN
V	1	VENT	2"	300#	1 RFWN
D1	1	DIRTY DRAIN	2"	300#	RFLWN
D2	1	CLEAN DRAIN	2"	300#	RFLWN
P1,P2	2	DP CONNECTIONS	2"	300#	RFLWN
P3	1	PRESSURE GAUGE	2"	300#	RFLWN
R	1	RELIEF	3"	300#	RFLWN
L1,L2	2	LEVEL GAUGE 2	2"	300#	RFLWN
LT1,LT2	2	LEVEL TRANSMITTER	2"	300#	RFLWN

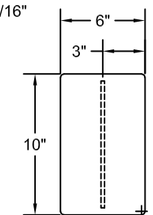


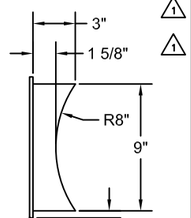




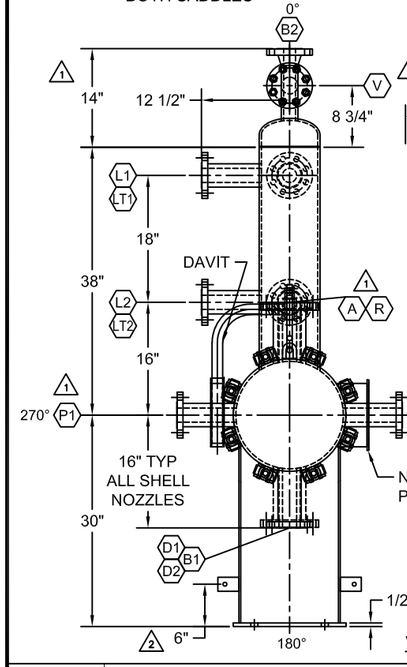


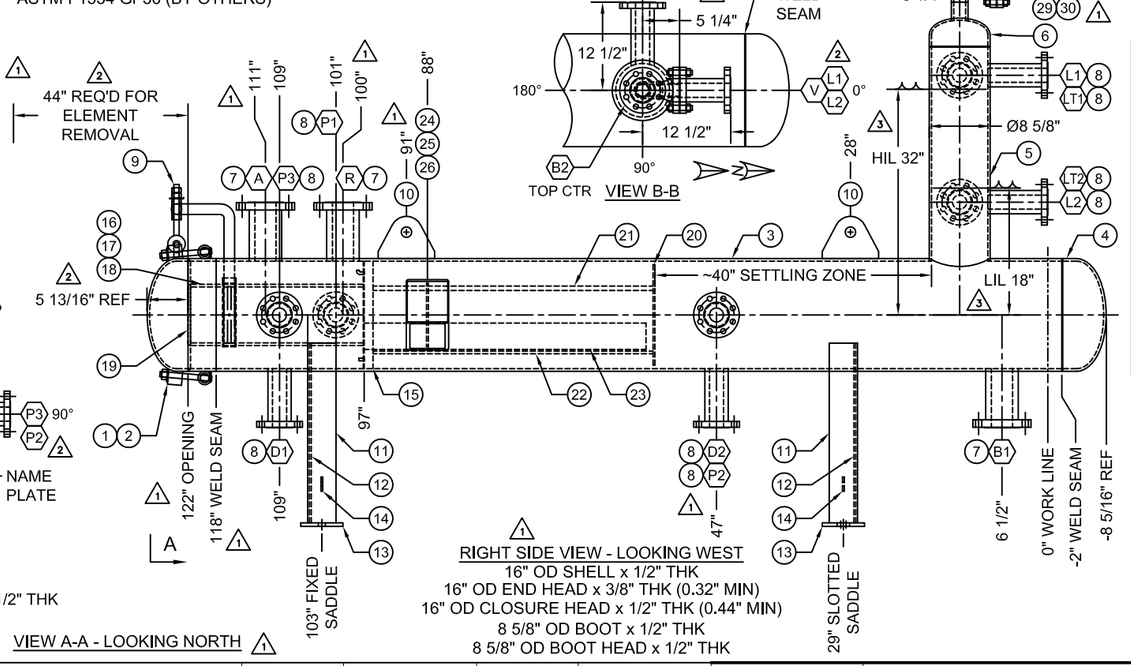


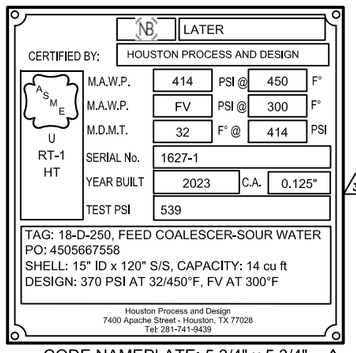




NAMEPLATE BRACKET DETAIL
SEAL WELD NAMEPLATES TO BRACKET







CODE NAMEPLATE: 5 3/4" x 5 3/4" 1



PALL NAMEPLATE: 5 1/2" x 3 3/8" 1

1 NAMEPLATE DETAILS
SEAL WELD NAMEPLATES TO BRACKET

INSPECTION

IN HOUSE: ALL ITEMS ARE INSPECTED BY OUR Q.C. REPRESENTATIVE.
CODE:AUTHORIZED INSPECTION ASSOCIATES
CUSTOMER/THIRD PARTY: CUSTOMER TO ADVISE

DESIGN

DESIGN & CONSTRUCTION CODE:	ASME SECTION VIII, DIVISION 1, EDITION '2021'		
CODE STAMP:	YES	NATIONAL BOARD:	YES
OTHER:	N/A	NACE COMPLIANT:	1 YES, MR0103
INTERNAL DESIGN:	370 PSIG AT 450 °F	INTERNAL C.A.:	0.125"
		WELDED INTERNALS C.A.:	2 0.25"
MAWP:	414 PSIG AT 450 °F	LIMITED BY:	BOOT
MAP:	449 PSIG AT 100 °F	LIMITED BY:	CLOSURE RING
MDMT:	1 32 °F AT 414 PSIG	IMPACTS REQUIRED:	NO
EXT. DESIGN:	(FV) -15 PSIG AT 300 °F	EXTERNAL C.A.:	NONE
LONG. SEAM JOINT EFF.:	100%	CIRC. SEAM JOINT EFF.:	1 100%

PWHT: YES, WARM-UP: 800°F TO 1175°F AT 400°F/HR MAX
HOLD AT: 1175°F +/-25°F FOR 1 HR MIN
COOL-DOWN: 1175°F TO 800°F AT 500°F/HR MAX
WIND: ASCE 7-16, 101 MPH, CAT. III, EXP. C
SEISMIC: ASCE 7-16, CLASS D, IMP. 1.5, Rp = 2.5, Ss = 1.616g, S1 = 0.579g, CAT. III 2
OPERATING CONDITIONS: 176.2 PSIG AT 100.7 °F
SPECIFIC GRAVITY: 0.992
ALLOWABLE PRESSURE DROP < 1.0 (NORMAL), 10.0 (MAXIMUM)

PRESSURE TEST (REF. HP&D HYDRO-TEST PROCEDURE FOR ADDITIONAL REQ'TS.)

HYDRO-TEST PRESSURE:	539 PSIG	HYDRO-TEST CERTIFICATE:	YES
HYDRO-TEST DURATION:	1 HR(S)	HYDRO-TEST CHART (P OR P&T):	YES, P&T
HYDRO-TEST ORIENTATION:	VERTICAL	MAX. CHLORIDE CONTENT:	50 ppm
-	-	RE-PAD AIR & SOAP TEST:	N/A

COATINGS / INSULATION / FIREPROOFING

PAINT SPEC: A8KM-PP-000-500520-A
EXTERNAL - SYSTEM 1
PREP: NEAR WHITE BLAST (SSPC-SP10)
1st COAT: S.W. ZINC CLAD II (2.5-4 mils DFT)
2nd COAT: S.W. MACROPOXY 646 (4-6 mils DFT)
3rd COAT: S.W. ACROLON 218 HS (2-3 mils DFT)
FINISH COLOR: LIGHT GRAY, RAL 7035

INTERNAL - NONE
PREP: CLEAN AND DESCALE
FIREPROOFING: NONE
INSULATION: NONE

3 SHIPPING AND MARKING NOTES

1. SHIPPING PREP: MANWAY CLOSURE & NOZZLE V BLIND FLANGE SHALL SHIP W/ SERVICE GASKET & FULL BOLTING INSTALLED READY FOR SERVICE. (VESSEL WILL NOT SHIP W/ ELEMENTS INSTALLED & WILL NOT BE READY FOR SERVICE). MANWAY CLOSURE & NOZZLE V BLIND FLANGE SHALL BE COATED SAME AS VESSEL. ALL OPEN FLANGE FACES SHALL SHIP W/ 1/8" THK NEOPRENE GASKETS, 3/16" MIN THK STEEL COVERS NO SMALLER THAN FLANGE OD & SECURED W/ (4) BOLTS MIN., EQ. SPACED. SHIPPING COVERS & BOLTING SHALL BE PAINTED YELLOW. COVERS SHALL ALSO BE PAINTED W/ RED LETTERING THAT READS "SHIPPING COVER - NOT FOR PRESSURE TESTING". IF COVER IS TOO SMALL, A WIRE TAG SHALL BE TIED TO ITS BOLTING.
2. VESSEL SHALL SHIP STRAPPED TO IT'S OWN SADDLES.
3. NITROGEN BLANKET (N2 PURGE) REQUIRED FOR SHIPMENT. VESSEL SHALL BE PRESSURIZED W/ 5 PSIG OF NITROGEN. TWO REGULATING PRESSURE GAUGES SHALL BE PROVIDED. GAUGES SHALL BE IN A LOCATION THAT IS EASILY READ. GAUGES SHALL BE PROTECTED W/ WIRE CAGE DURING SHIPMENT. A 1/2" NPT NON-RETURN VALVE SHALL BE PROVIDED AT ONE GAUGE LOCATION TO FILL & MAINTAIN PURGE DURING SHIPMENT. A NITROGEN BOTTLE SHALL BE SUPPLIED FOR ADDING PRESSURE DURING SHIPMENT IF GAUGE FALLS BELOW 5 PSIG. EACH MANWAY, BLIND FLANGE & SHIPPING COVER SHALL SHIP W/ WIRE TAG THAT READS "CAUTION - DO NOT OPEN - VESSEL UNDER PRESSURE - 5 PSI N2 PURGE INSIDE". LARGE, BRIGHTLY COLORED WATERPROOF LABELS SHALL BE PLACED ON TWO SIDES OF VESSEL, 180° APART THAT READ "CAUTION - DO NOT OPEN - VESSEL UNDER PRESSURE - 5 PSI N2 PURGE INSIDE".
4. ALL INTERNAL HARDWARE NOT INSTALLED SHALL SHIP LOOSE.
5. ESTIMATED WTS. - EMPTY: 1,800 LBS.; FULL OF WATER: 2,700 LBS.; OPER.: 2,700 LBS.
6. VESSELS SHALL BE PAINTED ON TWO SIDES OF SHELL, 180° APART, IN 3" HIGH LETTERS WITH "PWHT - DO NOT BURN OR WELD".
7. VESSEL SHELL SHALL BE PAINTED WITH PO#, TAG# & WEIGHT IN A VISIBLE LOCATION.
8. VESSEL MARKINGS SHALL BE A CONSPICUOUSLY CONTRASTING COLOR.
9. VESSEL LIFT LUGS SHALL BE COATED SAME AS VESSEL & ALSO MARKED IN RED.

1 SOUR WATER SERVICE VESSEL

Rev. No.	Revision Description	Drawn	Date	Check	Date
6					
5	RENAMED CHART PER COMMENTS	LC	6/24/2024		
4	ADDED ASD CHART BACK TO DRAWING	LC	11/2/2023		
3	REV. SHIPPING NOTES & PER MISC. COMMENTS	LC	8/7/2023		
2	REVISED PER COMMENTS	LC	12/21/2022		
1	REVISED PER COMMENTS	LC	10/10/2022		
0	FIRST ISSUE - FOR APPROVAL	LC	6/29/2022		

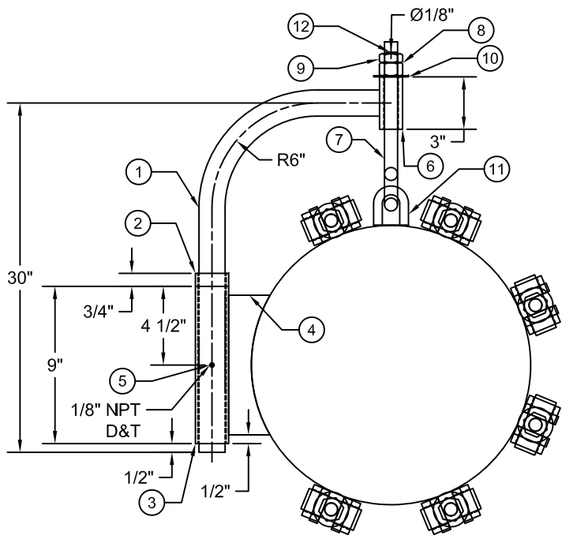
Equip. Owner:	AIR PRODUCTS MANUFACTURING, LLC 1		
P.O. No.:	-		
Location:	PARAMOUNT, CA		
Project:	WORLD ENERGY RENEWABLES PROJECT	Work Order:	4505231127
Project No.:	EN-20-XXXX / A8KM	Model No.:	VH005LL4S16AF3C
Tag:	18-D-250	Quantity:	ONE
Service:	FEED COALESCER	Shop No.:	1627-1
Drawing Type:	DIMENSIONAL GENERAL ARRANGEMENT	Drawing No.:	1627-A1

PALL CORPORATION
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⚠1 BILL OF MATERIALS

ITEM	NAME OR MARK	QTY	SIZE & DESCRIPTION	MATERIAL	REMARKS	MTR'S REQ'D	UCS-79 & UG-81
1	ARM	1	1 1/2" DIA ROUND BAR	SA-36		NO	
2	ARM STOP	1	1/2" THK x 2 1/2" OD x 1 9/16" ID PLATE	SA-36		NO	
3	ARM SLEEVE	1	1 1/2" STD WT (0.145" WALL) PIPE	SA-106-B		NO	
4	BRACKET	1	1/2" THK PLATE	SA-36		NO	
5	GREASE ZERK	1	1/8" NPT GREASE ZERK (ZINC PLATED OR GALVANIZED)	MILD STEEL		NO	
6	BOLT SLEEVE	1	1" S/160 (0.250" WALL) PIPE	SA-106-B		NO	
7	EYE BOLT	1	3/4"-10 EYE BOLT (ZINC PLATED OR GALVANIZED)	SA-193-B7		NO	
8	EYE BOLT NUT	1	3/4"-10 HEAVY HEX NUT (ZINC PLATED OR GALVANIZED)	SA-194-2H		NO	
9	EYE BOLT JAM NUT	1	3/4"-10 HEX HEAD JAM NUT (ZINC PLATED OR GALVANIZED)	SA-194-2H		NO	
10	EYE BOLT WASHER	1	3/4" SERIES W FLAT WASHER (ZINC PLATED OR GALVANIZED)	SA-36		NO	
11	DAVIT LIFT LUG	1	1/2" DIA ROUND BAR	SA-36		NO	
12	COTTER PIN	1	1/8" DIA COTTER PIN TO SUIT 3/4" DIA BOLT	SS		NO	
13							
14							
15							

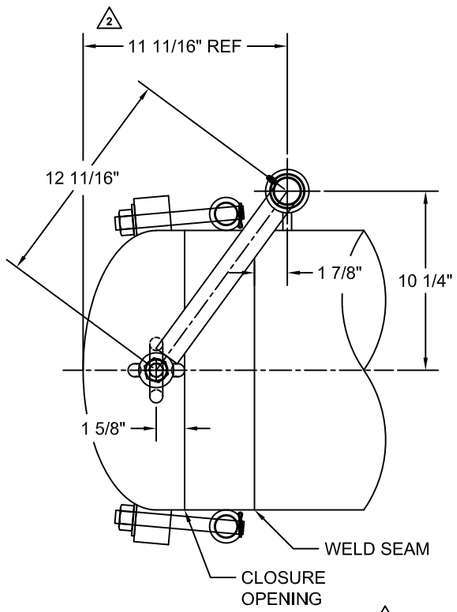
NOTES:
1. MATERIAL QUANTITIES SHOWN ARE FOR ONE (1) ASSEMBLY.
2. VENDOR MUST BE ADVISED THAT MILL MARKINGS MUST BE TRANSFERRED AS REQ'D BY ASME SECT. II. MARKINGS MUST BE VERIFIED UPON RECEIPT.
3. ALL STAINLESS STEEL MATERIALS SHALL BE DUAL CERTIFIED AS STRAIGHT GRADE AND 'L' GRADE.
4. MATERIALS SHALL BE PURCHASED PER THE REQUIREMENTS OF SPEC-ENG-MQ042.
5. MATERIALS NOT LISTED IN PRECEDING NOTES SHALL BE PURCHASED FROM THE FOLLOWING COUNTRIES OF ORIGIN (WHERE THE HEAT NUMBER IS APPLIED): AUSTRIA, BELGIUM, CANADA, DENMARK, FINLAND, FRANCE, GERMANY, NORTHERN IRELAND, ITALY, JAPAN, MEXICO, NETHERLANDS, NORWAY, PORTUGAL, SOUTH KOREA, SPAIN, SWEDEN, SWITZERLAND, UNITED KINGDOM AND UNITED STATES.



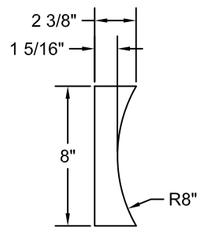
⚠1 DAVIT ASSEMBLY

16" CLOSURE HEAD ASSEMBLY
WEIGHT: 70 lbs

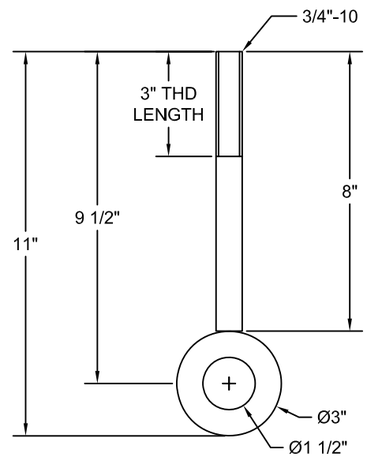
SWINGBOLTS NEAR DAVIT REMOVED FOR CLARITY



⚠1 TOP VIEW ⚠2



⚠1 BRACKET



EYE BOLT

⚠1 SOUR WATER SERVICE VESSEL

Rev. No.	Revision Description	Drawn	Date	Check	Date
6					
5					
4					
3					
2	ADDED DIMENSION AND NORTH ARROW	LC	12/21/2022		
1	CORRECTED ORIENTATION	LC	9/30/2022		
0	FIRST ISSUE - FOR APPROVAL	LC	6/29/2022		

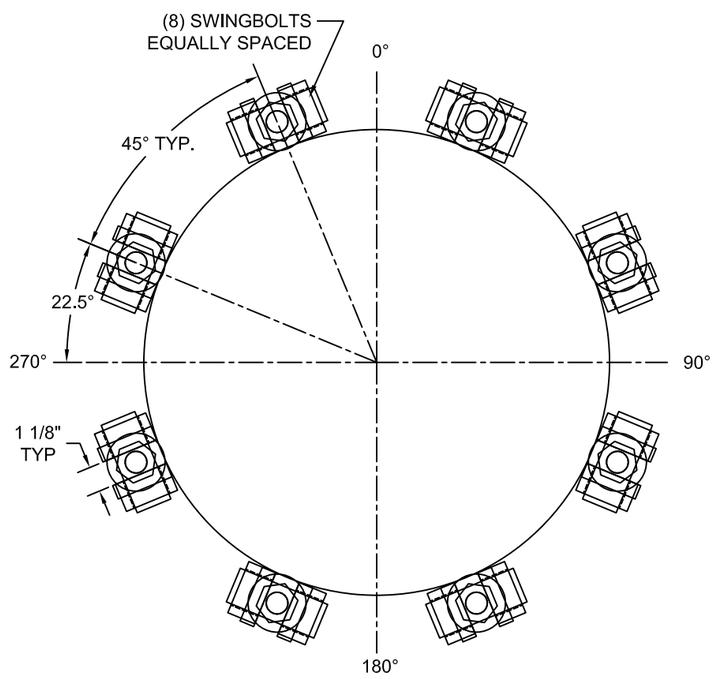
Equip. Owner:	AIR PRODUCTS MANUFACTURING, LLC		
P.O. No.:	-		
Location:	PARAMOUNT, CA		
Project:	WORLD ENERGY RENEWABLES PROJECT	Work Order:	4505231127
Project No.:	EN-20-XXXX / A8KM	Model No.:	VH005LL4S16AF3C
Tag:	18-D-250	Quantity:	ONE
Service:	FEED COALESCER	Shop No.:	1627-1
Drawing Type:	DAVIT DETAIL	Drawing No.:	1627-A5

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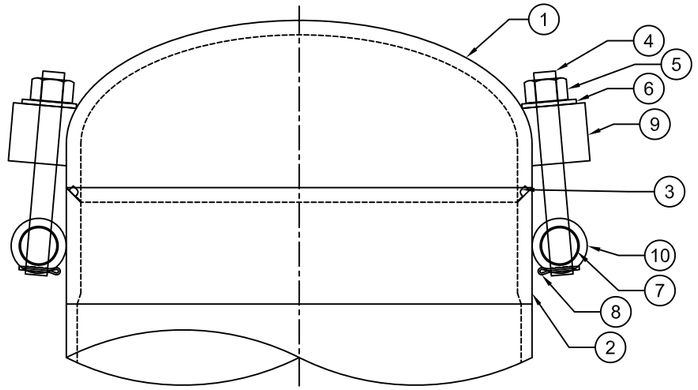
BILL OF MATERIALS

ITEM	NAME OR MARK	QTY	SIZE & DESCRIPTION	MATERIAL SPECIFICATIONS	REMARKS	MTR'S REQ'D	UCS-79 & UG-81
1	CLOSURE HEAD	1	1/2" THK (0.44" MIN) x 16" OD 2:1 ELLIP. HEAD W/ 2" SF	SA-516-70		YES	YES
2	CLOSURE RING	1	16" XH (1/2" WALL) PIPE	SA-106-B		YES	
3	CLOSURE SEAL	3	0.275" CROSS SECTION O'RING TO SUIT 16" CLOSURE, P/N 01459B	BUNA	2 SPARE	NO	
4	BOLTING - STUD	9	1"-8 x 8 1/2" LONG STUD (ZINC PLATED)	SA-193-B7M	1 SPARE	NO	
5	BOLTING - NUT	9	1"-8 HEAVY HEX NUT (ZINC PLATED)	SA-194-2HM	1 SPARE	NO	
6	BOLTING - WASHER	9	1" TYPE 'W' FLAT WASHER (ZINC PLATED)	CS	1 SPARE	NO	
7	BOLTING - PIN	9	1 1/2" DIA x 4" LONG PD BAR (ZINC PLATED)	SA-193-B7M	1 SPARE	NO	
8	BOLTING - COTTER PIN	9	1/8" DIA COTTER PIN TO SUIT 1" BOLT	SS	1 SPARE	NO	
9	BOLT CLIP - HEAD	16	1/2" THK x 2 1/2" WIDE x 2 1/2" LONG (SHORT SIDE) PLATE	SA-516-70		YES	
10	BOLT RING - SHELL RING	16	2" S/160 (0.344" WALL) x 1 1/4" LONG PIPE	SA-106-B		YES	

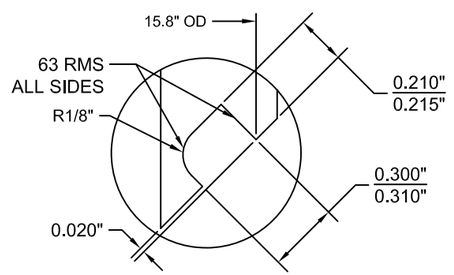
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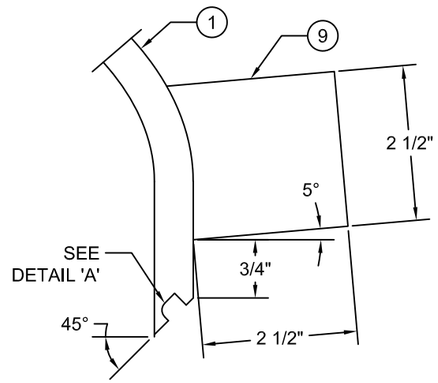
CLOSURE PLAN VIEW



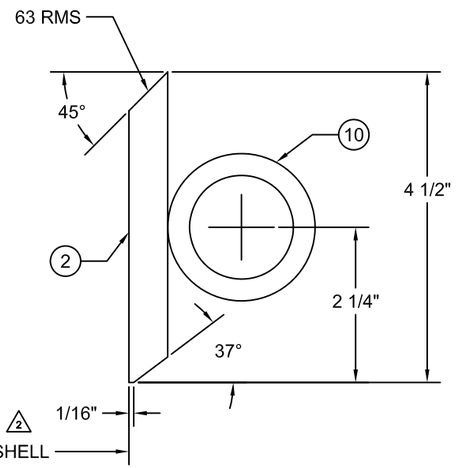
CLOSURE DETAIL



DETAIL 'A'



CLOSURE HEAD DETAIL



CLOSURE RING DETAIL

Rev. No.	Revision Description	Drawn	Date	Check	Date
6					
5					
4					
3					
2	CORRECTED SHELL I.D.	LC	12/21/2022		
1	REVISED TITLE BLOCK	LC	9/30/2022		
0	FIRST ISSUE - FOR APPROVAL	LC	6/29/2022		

Equip. Owner:	AIR PRODUCTS MANUFACTURING, LLC		
P.O. No.:	-		
Location:	PARAMOUNT, CA		
Project:	WORLD ENERGY RENEWABLES PROJECT	Work Order:	4505231127
Project No.:	EN-20-XXXX / A8KM	Model No.:	VH005LL4S16AF3C
Tag:	18-D-250	Quantity:	ONE
Service:	FEED COALSCER	Shop No.:	1627-1
Drawing Type:	CLOSURE DETAIL	Drawing No.:	1627-A6

△1 SOUR WATER SERVICE VESSEL

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