

CODE: ASME SECT. VIII, DIV. 1, LATEST EDITION	
CODE CERT. REQ'D: YES	CODE STAMP: YES
NATIONAL BOARD REGISTRATION: YES	
OPR. PRESS: 350 PSIG @ 105° F	
DES PRESS. (INTL): 500 PSIG @ 300° F	
DES PRESS. (EXT): 15 PSI @ 300° F	
MIN. METAL DES TEMP: -50° F	
CA: SHELL = NOTE 10 HEADS = NOTE 10 NOZZ = NOTE 10	
SEISMIC PER: NOTE 8	
WIND PER: NOTE 9	
L.L. FOR DESIGN: 8'-6" @ SP. GR. 0.94	
MAWP: (+) PSIG @ 300° F LIMITED BY (*)	
MAP N&C: (+) PSIG @ 60° F LIMITED BY (*)	
SHOP HYD: (+) PSIG @ 60° F	
FIELD HYD N&C: (+) PSIG @ 60° F	
FIELD HYD CORR.: (+) PSIG @ 60° F	
PWHT: YES	RADIOGRAPH RT - 1
JOINT EFF.: 100%	
ALLOW. STRESS: 20,000 PSIG @ 300° F	
MATERIALS	
SHELL: SA-516-70 N + 1/8" THK 316L CLAD (NOTE 12)	
HEADS: SA-516-70 N + 1/8" THK 316L CLAD (NOTE 12)	
SUPPORTS: SA-516-70 N	
INTERNALS: 316L SS	TRAYS: N/A
BOLTS INT.: SA-193-B8M	NUTS: SA-194-8M
BOLTS EXT.: SA-320-L7	NUTS: SA-194-4
FLANGES: SA-350-LF2	NOZZ NECK: SA-333-6
GSKT: NOTE 18	
CAPACITY: 7,801 CU. FT.	
FAB. WT.: 343,000 LBS.	EMPTY WT.: 367,000 LBS.
TRAY WT.: N/A	INTERNAL WT.: 16,700 LBS.
OPR. WT.: 672,000 LBS.	TEST WT. (SHOP): 816,000 LBS.
PAINTING: NOTE 11	
INSULATION: NOTE 12	
FIREPROOFING: NO	
ACCESSORIES BY FABRICATOR	
VESSEL DAVIT MARK No.	YES NO
LADDER & PLATFORM CLIPS	X
PIPE SUPPORTS AND PIPE GUIDE CLIPS	X
INSULATION SUPPORTS	X
FIREPROOFING SUPPORTS	X
GROUNDING LUGS	X
LIFTING LUGS	X

NOZZLE SCHEDULE					
ITEM	No.	SIZE	PROJ	RATING	SERVICE
N1	1	36"	8'-7"	CL-300	INLET
N2	1	24"	7'-9 1/2"	CL-300	LIQUID OUTLET
N3	1	30"	8'-6"	CL-300	VAPOR OUTLET
N4	1	4"	8'-6"	CL-300	VENT
N5	1	20"	8'-6"	CL-300	PSV
N6A-N6H	8	2"	END ELEV.	CL-300	SANDJET INLET
N7A-N7H	8	3"	7'-9"	CL-300	SANDJET OUTLET
N8A-N8D	4	4"	END ELEV.	CL-300	LEVEL XMTR (NULEONIC)
N8E-N8G	3	6"	END ELEV.	CL-300	LEVEL XMTR (NULEONIC)
N9A-N9C	3	3"	SIDE ELEV.	CL-300	LG/LT BRIDLE
N10A-N10B	2	3"	END ELEV.	CL-300	DIFFERENTIAL PRESS. XMTR
N11	1	2"	END ELEV.	CL-300	TEMP XMTR
N12A-N12D	4	2"	SIDE ELEV.	CL-300	PRESS. XMTR
N13A-N13D	4	6"	7'-8"	CL-300	DRAIN
N14	1	4"	8'-6"	CL-300	LEVEL XMTR (NCR)
N15	1	4"	END ELEV.	CL-300	ROD OUT CONN. W/ B.F.
N16	1	2"	END ELEV.	CL-300	FLUSHING CONN.
N17	1	2"	8'-6"	CL-300	DIFF. PRESS. TRANSDUCER
N18A-N18B	2	2"	SIDE ELEV.	CL-300	HEAD SANDJET
N19	1	3"	SIDE ELEV.	CL-300	AUX. SANDJET
M1	1	24"	8'-6"	CL-300	MANWAY W/ B.F. & DAVIT
M2	1	30"	SIDE ELEV.	CL-300	MANWAY W/ B.F. & DAVIT
M3	1	30"	END ELEV.	CL-300	MANWAY W/ B.F. & DAVIT
M4	1	24"	SIDE ELEV.	CL-300	MANWAY W/ B.F. & DAVIT

NOTES: (CONT'D)

- EXTERNAL COATING = PER SPC-MA-00002  
OUTDOORS: PER TABLE 2  
ABRASIVE BLASTCLEANING TO SSPC-SP10  
(2) COATS CARBOLINE THERMOLINE 450, 6.0 MILS DFT PER COAT (OR LISTED EQUAL)  
INDOORS: PER TABLE 1  
ABRASIVE BLAST CLEANING TO SSPC-SP10  
(2) COATS CARBOLINE THERMOLINE 450, 6.0 MILS DFT PER COAT (OR LISTED EQUAL)
- OUTDOOR SURFACES TO BE INSULATED PER SPC-MA-00007.  
INSULATION THICKNESS: 4"  
INSULATION MATERIAL: POLYSOCYANURATE/POLYURETHANE
- FOR THICK C.S. WELDS > 2", PREHEAT FOR WELD JOINT, SHALL BE MAINTAINED UNTIL PWHT OR INTERMEDIATE STRESS RELIEF (ISR). ISR SHALL BE PERFORMED AT 1,000° F FOR 1 HOUR MINIMUM BEFORE COOLING FROM PREHEAT. THIS REQUIREMENT APPLIES TO WELD REPAIR AND TO REPAIRS MADE TO LOCATIONS WHERE SAMPLES ARE REMOVED.
- IN LIEU OF ISR, DEHYDROGENATION HEAT TREATMENT (DHT), SHALL BE MADE AT 570° F FOR 1 HOUR MINIMUM FOR WELDS THAT ARE COOLED DOWN BEFORE PWHT. THE REQUIREMENT OF BOTH NOTE "13" & "14" ARE RECOMMENDED TO DRIVE OUT HYDROGEN FROM THE WELD METAL.
- ALL NOZZLES SHALL BE INTEGRALLY REINFORCED IN ACCORDANCE WITH ASME SECTION VIII, DIVISION 1, FIGURE UW16.1 (f3), UW16.1 (f4) OR UW16.1 (e) AND SHALL HAVE WELDS 100% RADIOGRAPHED PER PARAGRAPH 5.1. OR FULL U.T. WHEN R.T. NOT PRACTICAL. IN ADDITION, NOZZLES WITH A DIAMETER LESS THAN 3" AND NOT INTEGRALLY REINFORCED MAY BE IN ACCORDANCE WITH UW16.1 (c), AND SHALL HAVE THE WELDS 100% ULTRASONIC INSPECTED.
- ALL PRESSURE-CONTAINING WELDMENTS ARE TO BE CHECKED FOR HARDNESS OF WELD AND HEAT AFFECTED ZONE (HAZ), AFTER PWHT. THE MAXIMUM BRINELL HARDNESS (BHN) OF THE WELD AND BASE METAL IN HAZ SHALL NOT EXCEED 200 BHN.
- VESSEL TO BE DESIGNED TO HANDLE A MAXIMUM SLUG OF 500 BBL W/ SLUG DENSITY OF 56 LBM/FT<sup>3</sup> FLOWING AT 50 FT/SEC. FREQUENCY=0.35 PER MINUTE. VESSEL DESIGN LIFE=40 YEARS.
- GASKET: SPIRAL WOUND NON-ASBESTOS FILLED, WITH 304 SS WINDING & 1/8" OUTER C.S. CENTERING RING & S.S. INNER RING, CL-300 B16.20 FS CGI OR EQUAL.

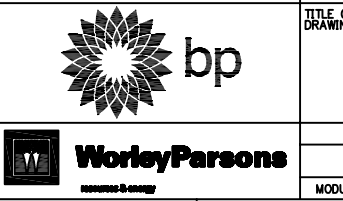
STANDARDS AND SPECS	
DRAWING NO.	TITLE
CRT-AK-46-01	CRITERIA FOR NEW PRESSURE VESSELS
SPC-AK-46-010	SPECIFICATION FOR NEW PRESSURE VESSELS
SPC-AK-46-020	SPECIFICATION FOR STANDARD VESSEL DETAILS
SPC-MA-00007	INSULATION FOR MODULE PIPING AND EQUIPMENT
SPC-MA-00002	EXTERNAL COATINGS FOR MODERATELY CORROSIVE SERVICE

REFERENCE DRAWINGS		
NO.	DATE	REVISION
STD-VS-230	01/07	ISSUED FOR IN-HOUSE REVIEW PER EPT 37305244-02
	02/07	ISSUED FOR CLIENT REVIEW PER EPT 37305244-02
	08/07	ISSUED FOR APPROVAL PER EPT 37305244-02
	01/08	ISSUED AS INDICATED, IFA PER EPT 37305244-02
	04/08	ISSUED AS INDICATED, IFA PER EPT 37305244-02
	11/08	ISSUED FOR APPROVAL PER EPT 37305244-02
	12/08	ISSUED FOR SQUAD CHECK PER EPT 37305244-02

- NOTES:
- ALL DIMENSIONS ARE FROM REFERENCE TANGENT LINE UNLESS NOTED OTHERWISE.
  - NOZZLES MANWAYS, ETC. SHALL HAVE THE SAME DESIGNATION AS SHOWN ON THIS DRAWING.
  - BOLT HOLES SHALL STRADDLE VESSEL NATURAL CENTERLINES, EXCEPT AS NOTED.
  - ALL REMOVABLE INTERNALS SHALL PASS THROUGH VESSEL MANWAY.
  - ALL ATTACHMENTS WELDED TO THE PRESSURE PARTS SHALL BE THE SAME MATERIAL "P" GROUP AS THE PRESSURE PART, UNLESS OTHERWISE NOTED.
  - FABRICATOR SHALL PROVIDE AND INSTALL CLIPS WELDED TO THE VESSEL. CLIPS SHALL HAVE CONTINUOUS SEAL WELD.
  - VESSEL SHALL BE THOROUGHLY CLEANED INSIDE AND OUTSIDE AND SHALL BE FREE FROM RUST, SCALE, SLAG, WELD SPATTER AND FOREIGN MATTER FOR SHOP HYDROTEST AND SHALL BE THOROUGHLY DRIED BEFORE SHIPPING.
  - SEISMIC DESIGN PER IBC 2006  
SITE CLASS: B  
IMPORTANT FACTOR I<sub>p</sub>: 1.5  
SPECTRAL RESPONSE ACC. @ SHORT PERIODS, S<sub>s</sub>: 38.00%  
SPECTRAL RESPONSE ACC. @ 1 SEC. PERIOD, S<sub>1</sub>: 10.00%  
RESPONSE MODE FACTOR, R<sub>p</sub>: 2.5  
z/h RATIO: 1  
AMPLIFICATION FACTOR, a<sub>p</sub>: 1
  - WIND DESIGN PER IBC 2006  
BASIC WIND SPEED: 110 MPH  
EXPOSURE: D  
IMPORTANCE FACTOR, I: 1.15  
WIND DIRECTIONALITY FACTOR, K<sub>d</sub>: 0.95  
TOPOGRAPHIC FACTOR, K<sub>z</sub>: 1
  - BASE METAL SHALL BE SA-516-70N W/ 1/8" THICK SA-246-316L CLADDING OR WELD OVERLAY. ALL NOZZLES AND FLANGE FACES SHALL INCLUDE WELD OVERLAY.

ENGINEERING RECORD	DATE
DRN: YLT	12/06
DSGN: YLT	12/06
CHK: PP	12/06
APP: RHK	12/06
SCALE: NONE	

**DSGN/CNST**



* BY FABRICATOR			
TITLE OF DRAWING: Z PAD VESSELS GENERAL ARRANGEMENT INLET SEPARATOR VSP-Z6011			
WORK ORDER: 37305244-02	DRAWING NUMBER: VS-WPZ-00010	REV: G	SHEET: 001
MODULE: 601	JOB NUMBER:		OF 006