

PLAN

ELEVATION
ONE VESSEL REQUIRED
SEE PLAN FOR TRUE ORIENTATION

NOTES: (CONT'D)

- EXTERNAL COATING = PER SPC-MA-00002 (EXCEPT UNDER SKIRT FIREPROOFING)
ALL SURFACES (EXCEPT SKIRT) SHALL BE PAINTED PER TABLE 1
ABRASIVE BLAST CLEANING: SSSP-SP10
(1) COAT OF CARBOLINE CARBOZINC II 2.0-3.0 MILS DFT
(1) COAT OF CARBOLINE CARBOGUARD 893 SG 4.0-6.0 MILS DFT
(1) COAT OF CARBOLINE CARBOTHANE 134 HG 2.0-2.5 MILS DFT (OR LISTED EQUALS)
SKIRT (OUTSIDE ONLY)
ABRASIVE BLASTCLEANING: SSSP-SP10 2.0-2.5 PROFILE
(1) COAT OF INTERNATIONAL PAINT INTERGARD 269 2.0-3.0 MILS DFT (NEEDS TO BE COMPATIBLE WITH CHARTEK 7 FIREPROOFING)
- FOR THICK CS 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 THE PREHEAT. THIS REQUIREMENT APPLIES TO WELD REPAIR AND 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 REQUIREMENTS FOR BOTH NOTES "12" & "13" 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.
- SUPPLIER SHALL DESIGN & SUPPLY INTERNAL INLET SEPERATOR/DISTRIBUTOR, & MIST ELIMINATOR (SEE RPT-PI-WPZ-00020-001).
- VESSEL SHALL BE DESIGNED FOR 200 PPM H₂S SERVICE. ALL MATERIALS SHALL MEET THE REQUIREMENTS OF NACE MRO175. ROLLED PLATE SHALL BE Z-QUALITY STEEL AS SPECIFIED IN SPC-AK-46-010, PARA. 6.2.2.

NOTES:

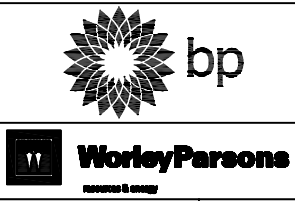
- ALL DIMENSIONS ARE FROM REFERENCE TANGENT LINE UNLESS NOTED OTHERWISE.
- NOZZLES MANWAYS, ETC. SHALL HAVE THE SAME DESIGNATION AS SHOWN ON THIS DRAWING.
- BOLT HOLES SHALL STRADDLE VESSEL NATURAL CENTERLINES, EXCEPT AS NOTED.
- ALL REMOVABLE INTERNALS SHALL PASS THROUGH VESSEL MANWAY.
- ALL ATTACHMENTS 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_p: 1.5
SPECTRAL RESPONSE ACC. @ SHORT PERIODS, S_s: 38.00%
SPECTRAL RESPONSE ACC. @ 1 SEC. PERIOD, S₁: 10.00%
RESPONSE MODE FACTOR, R_p: 2.5
z/h RATIO: 1
AMPLIFICATION FACTOR, a_p: 2.5
- WIND DESIGN PER IBC 2006
BASIC WIND SPEED: 110 MPH
EXPOSURE: D
IMPORTANCE FACTOR, I: 1.15
WIND DIRECTIONALITY FACTOR, K_d: 0.95
TOPOGRAPHIC FACTOR, K_z: 1
- GASKETS: SPIRAL WOUND NON-ASBESTOS FILLED WITH 304SS WINDING & 1/8" OUTER C.S. CENTERLING RING & S.S. INNER RING, CL-600 B16.20 FS CGI OR EQUAL.

| BARGE LOADS | | |
|-------------|------------------|-------------------|
| WAVE | LOAD DESCRIPTION | FORCE COEFFICIENT |
| NORMAL | HOR. B1R | 0.3853 |
| | VER. B1P | 0.1 |
| ABNORMAL | HOR. B2R | 0.4427 |
| | VER. B2H | 0.4 |
| ABNORMAL | HOR. B3P | 0.0908 |
| | VER. B3H | 0.4 |

| 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-00002 | EXTERNAL COATINGS FOR MODERATELY CORROSIVE SERVICE |
| RP0178 | NACE FABRICATION DETAILS FOR LINED VESSELS AND TANKS |

| REFERENCE DRAWINGS | NO. | DATE | REVISION | BY | CHK | APPD | NO. | DATE | REVISION | BY | CHK | APPD |
|--------------------|-----|-------|--|-----|-----|------|-----|------|----------|----|-----|------|
| STD-VS-230 | | 11/06 | ISSUED FOR IN-HOUSE REVIEW PER EPT 36324244-02 | YLT | PP | RHK | | | | | | |
| STD-VS-00-00216 | | 02/07 | ISSUED FOR CLIENT REVIEW PER EPT 36324244-02 | YLT | RHK | RHK | | | | | | |
| | | 09/07 | ISSUED FOR APPROVAL PER EPT 36324244-02 | NH | RHK | RHK | | | | | | |
| | | 03/08 | REVISED AS INDICATED, IFA PER EPT 36324244-02 | NH | RHK | RHK | | | | | | |
| | | 09/08 | REVISED AS INDICATED, IFA PER EPT 36324244-02 | KST | RHK | RHK | | | | | | |
| | | 10/08 | ISSUED FOR FABRICATION PER EPT 36324244-02 | KST | RHK | RHK | | | | | | |

| ENGINEERING RECORD | DATE |
|--------------------|-----------|
| DRN: | YLT 11/06 |
| DSGN: | YLT 11/06 |
| CHK: | PP 11/06 |
| APP: | RHK 11/06 |
| APP: | |
| SCALE: | NONE |



| | | | | | |
|---|--|------|-------|--------|--------------------------|
| CODE: | ASME SECT. VIII, DIV. 1, LATEST EDITION | | | | |
| CODE CERT. REQ'D: | YES | | | | |
| CODE STAMP: | YES | | | | |
| NATIONAL BOARD REGISTRATION: | YES | | | | |
| OPR. PRESS: | 712 PSIG @ 81° F | | | | |
| DES PRESS. (INTL): | 900 PSIG @ 300° F | | | | |
| DES PRESS. (EXT): | 15 PSI @ 300° F | | | | |
| MIN. METAL DES TEMP: | -20° F @ 900 PSIG | | | | |
| CA: SHELL = 1/8" HEADS = 1/8" NOZZ = 1/8" | | | | | |
| SEISMIC PER: | NOTE 8 | | | | |
| WIND PER: | NOTE 9 | | | | |
| L.L. FOR DESIGN: | 3'-0" @ SP. GR. 1.11 | | | | |
| MAWP: | 921 PSIG @ 300° F LIMITED BY SHELL | | | | |
| MAP N&C: | 982 PSIG @ 60° F LIMITED BY SHELL | | | | |
| SHOP HYD: | 1277 PSIG @ 60° F | | | | |
| FIELD HYD N&C: | - PSIG @ 60° F | | | | |
| FIELD HYD CORR.: | 1170 PSIG @ 60° F | | | | |
| PWHT: | YES RADIOGRAPH RT - 1 | | | | |
| JOINT EFF.: | 100% | | | | |
| ALLOW. STRESS: | 20,000 PSIG @ 200° F | | | | |
| MATERIALS | | | | | |
| SHELL: | SA-516-70 N + Z QUALITY + PWHT (NOTE 17) | | | | |
| HEADS: | SA-516-70 N + Z QUALITY + PWHT (NOTE 17) | | | | |
| 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-194-7 | | | | |
| FLANGES: | SA-350-LF2 NOZZ NECK: SA-333-6 | | | | |
| GSKT: | NOTE 17 | | | | |
| CAPACITY: | 602 CU. FT. | | | | |
| FAB. WT.: | 51,000 LBS. EMPTY WT.: 56,000 LBS. | | | | |
| TRAY WT.: | N/A INTERNAL WT.: 7,800 LBS. | | | | |
| OPR. WT.: | 64,000 LBS. TEST WT. (SHOP): 88,000 LBS. | | | | |
| PAINTING: | NOTE 11 | | | | |
| INSULATION: | NONE | | | | |
| FIREPROOFING: | YES | | | | |
| ACCESSORIES BY FABRICATOR | YES NO | | | | |
| VESSEL DAVIT MARK No. | | X | | | |
| 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 | 20" | ELEV. | CL-600 | VAPOR EXIT |
| N2 | 1 | 20" | 4'-7" | CL-600 | FEED |
| N3 | 1 | 4" | ELEV. | CL-600 | LIQUID EXIT |
| N4 | 1 | 2" | ELEV. | CL-600 | VENT |
| N5A | 1 | 3" | 4'-3" | CL-600 | LEVEL BRIDLE |
| N5B | 1 | 3" | ELEV. | CL-600 | LEVEL BRIDLE |
| N6A | 1 | 3" | 4'-3" | CL-600 | LEVEL TRANSMITTER |
| N6B | 1 | 3" | ELEV. | CL-600 | LEVEL TRANSMITTER |
| N7 | 1 | 2" | 4'-3" | CL-600 | PURGE |
| N8 | 1 | 6" | ELEV. | CL-600 | INSPECTION PORT W/ BLIND |
| M1 | 1 | 24" | 4'-9" | CL-600 | MANWAY W/BLD & DAVIT |

| | | | |
|---------|------|---------|--------------|
| FLANGE: | WNRF | FINISH: | 125-250 AARH |
|---------|------|---------|--------------|

| TITLE OF DRAWING: | | | |
|---|----------------|-----|--------|
| Z PAD VESSELS GENERAL ARRANGEMENT 2ND STAGE SUCTION SCRUBBER VS-Z6003 | | | |
| WORK ORDER | DRAWING NUMBER | REV | SHEET |
| 36324244-02 | VS-WPZ-00004 | F | 001 |
| MODULE: 600 | JOB NUMBER: | | OF 002 |