

# GENERAL NOTES

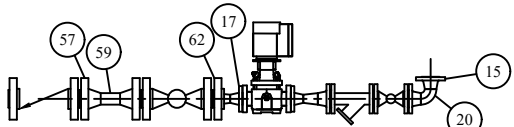
1. QUALITY CONTROL PROGRAM NUMBER: AQP-1317(S)
2. WELDING PROCEDURE REGISTRATION NUMBER: WP1970.2
3. SHELL AND HEAD MATERIAL: SA-516-70N
4. FLANGE MATERIAL: SA-105-N
5. PIPE MATERIAL: SA-106-B
6. PLATE MATERIAL: SA-516-70N/SA-36
7. BOLTING MATERIAL: SA-193-B7M/SA-194-2HM
8. INTERNAL SANDBLAST: SSPC-SP5 (WHITE)
9. INTERNALLY COAT: DEVOE 253 AS PER MANUFACTURER'S SPECIFICATION
10. EXTERNAL SANDBLAST: SSPC-SP6 (COMMERCIAL)
11. EXTERNAL COATING:
  - ALL AREAS: ONE COAT OF PRIMER
  - NON-INSULATED AREAS: ONE COAT OF INDUSTRIAL ENAMEL (WHITE)
12. INSULATION: 1 1/2" THK ALUMINUM CLAD RIGID URETHANE
13. ALL BOLT HOLES TO STRADDLE CENTERLINE
14. ALL OPENINGS TO BE COVERED PRIOR TO SHIPPING
15. ALL OUTSIDE PROJECTIONS ARE TO BE MEASURED ALONG THE CENTERLINE OF THE NOZZLE
16. FABRICATION TOLERANCE AS PER BILTON WELDING DRAWING NUMBER TOL2002
17. VESSEL TO BE REGISTERED IN ALBERTA
18. VESSEL TO BE SUPPLIED WITH U-STAMP
19. SHIPPING DIMENSIONS: 8'-6" W x 8'-0" H x 14'-6" LG
20. SHIPPING WEIGHT: 7,500 LBS
21. SERIAL NUMBER: 13658

# NOZZLE SCHEDULE

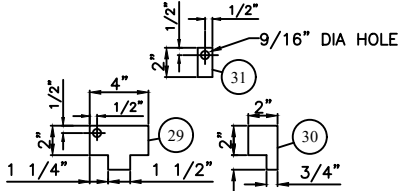
| MARK  | NO. REQ'D | DESCRIPTION        | SIZE | ANSI  | TYPE  | PROJECTION |         | WELD DETAIL | WELD |   | REPAD | BILL OF MATERIALS                            |  |
|-------|-----------|--------------------|------|-------|-------|------------|---------|-------------|------|---|-------|----------------------------------------------|--|
|       |           |                    |      |       |       | INSIDE     | OUTSIDE |             | A    | B |       | ITEM NUMBER                                  |  |
| N1    | 1         | INLET              | 4"   | 150#  | RFWN  | FLUSH      | 8"      | 1,3         | 1/4  | - | -     | 8,9,10                                       |  |
| N2    | 1         | OUTLET             | 4"   | 150#  | RFWN  | FLUSH      | 8"      | 1,3         | 1/4  | - | -     | 8,9                                          |  |
| N3    | 1         | PUMPOUT            | 2"   | 150#  | RFWN  | FLUSH      | 8"      | 1,3         | 1/4  | - | -     | 11-21,57,58,59,60,61                         |  |
| N4    | 1         | TRUCKOUT           | 2"   | 150#  | RFWN  | FLUSH      | 8"      | 1,3         | 1/4  | - | -     | 11,12,13,14,15,16,22,23,24,25,26,27,28,29,31 |  |
| N5A   | 1         | BRIDLE             | 2"   | 150#  | RFWN  | FLUSH      | 6"      | 1,3         | 1/4  | - | -     | 11,32,33                                     |  |
| N5B   | 1         | BRIDLE             | 2"   | 150#  | RFWN  | FLUSH      | 8"      | 1,3         | 1/4  | - | -     | 11,33,52                                     |  |
| N6    | 1         | TRUCK EQUALIZATION | 2"   | 150#  | RFWN  | FLUSH      | 6"      | 1,3         | 1/4  | - | -     | 11,32                                        |  |
| N7    | 1         | PURGE GAS          | 2"   | 150#  | RFWN  | FLUSH      | 6"      | 1,3         | 1/4  | - | -     | 11,12,13,14,32,53                            |  |
| C1    | 1         | TI                 | 3/4" | 6000# | CPLG  | FLUSH      | -       | 3           | 1/4  | - | -     | 34                                           |  |
| C2A/B | 1         | SUCKOUT            | 1/2" | 3000# | TOL   | -          | -       | 2           | 3/8  | - | -     | 35,36,37,38,39                               |  |
| C3    | 1         | FUEL GAS SUPPLY    | 1"   | 3000# | UNION | -          | -       | -           | -    | - | -     | -                                            |  |
| C4    | 1         | INSTRUMENT AIR     | 1/2" | 3000# | UNION | -          | -       | -           | -    | - | -     | -                                            |  |
| M1    | 1         | MANWAY             | 20"  | 150#  | RFSO  | FLUSH      | 8"      | 3,7         | 1/4  | - | -     | 40,41,42,43,44,45,46                         |  |

# BILL OF MATERIALS

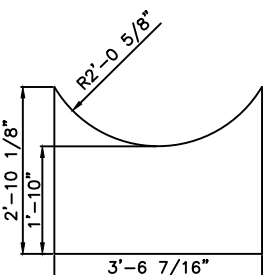
| ITEM | REQ'D | PART       | DESCRIPTION                                                                   | MATERIAL     | WEIGHT |
|------|-------|------------|-------------------------------------------------------------------------------|--------------|--------|
| 1    | 1     | SHELL      | 3/8" THK x 120" W ROLL TO 48" ID (CIRC=12"-9 1/8")                            | SA-516-70N   | 1940#  |
| 2    | 2     | HEAD       | 3/8" THK (0.3130" MIN) x 48" ID F&D (KR=3",CR=42")                            | SA-516-70N   | 510#   |
| 3    | 2     | SADDLE     | 6" x 1/4" THK FLATBAR ROLL TO 48 3/4" ID x 4'-8 3/4" LG                       | SA-36        | 40#    |
| 4    | 4     | SADDLE     | 4" x 3/8" FLATBAR x 2'-10 1/8" LG                                             | SA-36        | 60#    |
| 5    | 2     | SADDLE     | 3/8" THK x 34 1/8" W x 42 7/16" LG (SEE DETAIL)                               | SA-36        | 250#   |
| 6    | 1     | NAMEPLATE  | 6" x 8" NAMEPLATE BRACKET                                                     | SA-36        | 3#     |
| 7    | 1     | SKID       | SKID (SEE DWG B341-3 FOR DETAIL)                                              | SA-36        | 800#   |
| 8    | 2     | N1,N2      | 4" x 150# RFWN FLG SCH XH                                                     | SA-105-N     | 30#    |
| 9    | 2     | N1,N2      | 4" PIPE SCH XH x 8 5/8" LG (BOE,COE)                                          | SA-106-B     | 22#    |
| 10   | 1     | N1         | 3/8" THK DEFLECTOR PLATE                                                      | SA-36        | 10#    |
| 11   | 6     | N3,4,5,6,7 | 2" x 150# RFWN FLG SCH 160                                                    | SA-105-N     | 36#    |
| 12   | 10    | N3,N4,N7   | 2" x 150# RF FLEX GASKET                                                      | 304SS        | -      |
| 13   | 48    | N3,N4,N7   | 5/8" DIA x 3 1/2" LG STUD                                                     | SA-193-B7M   | -      |
| 14   | 96    | N3,N4,N7   | 5/8" DIA NUT                                                                  | SA-194-2HM   | -      |
| 15   | 5     | N3,N4      | 2" x 150# RFWN FLG SCH XH                                                     | SA-105-N     | 45#    |
| 16   | 2     | N3,N4      | 2" PIPE SCH 160 x 5 7/8" LG (BOE,COE)                                         | SA-106-B     | 7#     |
| 17   | 2     | N3         | 1 1/4" x 300# RFWN FLG SCH XH                                                 | SA-105-N     | 12#    |
| 18   | 2     | N3         | 1 1/4" x 300# RF FLEX GASKET                                                  | 304SS        | -      |
| 19   | 2     | N3         | 2" x 1 1/4" RED CONC SCH XH                                                   | SA-234-WPB   | 2#     |
| 20   | 1     | N3         | 2" x 90° SR BW ELBOW SCH XH                                                   | SA-234-WPB   | 2#     |
| 21   | 1     | N3         | 2" PIPE SCH XH x 5 1/8" LG (BBE)                                              | SA-106-B     | 2#     |
| 22   | 1     | N4         | 2" x 150# RFTO FLG                                                            | SA-105-N     | 4#     |
| 23   | 1     | N4         | 2" x 90° LR BW ELBOW SCH XH                                                   | SA-234-WPB   | 2#     |
| 24   | 1     | N4         | 2" PIPE SCH XH x 8" LG (BBE)                                                  | SA-106-B     | 8#     |
| 25   | 1     | N4         | 3" PIPE SCH XH x 4" LG (BOE,TOE)                                              | SA-106-B     | 3#     |
| 26   | 1     | N4         | 3" x 2" SWAGE SCH XH (BLE,TSE)                                                | SA-105-N     | 4#     |
| 27   | 1     | N4         | 3" MALE/FEMALE CAMLOCK c/w CAP                                                | -            | 2#     |
| 28   | 2     | N3,N4      | 3" x 1/8" SS FLATBAR x 4" LG                                                  | SA-240-TP316 | 2#     |
| 29   | 4     | N3,N4      | 3" x 1/8" SS FLATBAR x 2" LG (SEE DETAIL)                                     | SA-240-TP316 | 1#     |
| 30   | 2     | N3,N4      | 1" x 1/8" SS FLATBAR x 2" LG                                                  | SA-240-TP316 | 1#     |
| 31   | 2     | N3,N4      | 1/2" DIA x 2" LG BOLT c/w NUT                                                 | SS           | -      |
| 32   | 3     | N5A,N6,N7  | 2" PIPE SCH 160 x 3 7/8" LG (BOE,COE)                                         | SA-106-B     | -      |
| 33   | 1     | N5         | 4" NPS BRIDLE (SEE DWG B341-2 FOR DETAIL)                                     | -            | 250#   |
| 34   | 1     | C1         | 3/4" x 6000# FULL CPLG                                                        | SA-105-N     | 1#     |
| 35   | 3     | C2,N3      | 1/2" x 3000# TOL                                                              | SA-105-N     | 1#     |
| 36   | 3     | C2         | 1/2" x CLOSE NIPPLE                                                           | SA-106-B     | 1#     |
| 37   | 1     | C2         | 1/2" x 2000# 90° THRD ELBOW                                                   | SA-105-N     | 1#     |
| 38   | 1     | C2B        | 1/2" PIPE SCH XH x 6" LG (TOE,COE)                                            | SA-106-B     | 1#     |
| 39   | 2     | C2         | 12 GAUGE 36" x 24" CONTAINMENT TRAY                                           | -            | 25#    |
| 40   | 1     | M1         | 20" x 150# RFSO FLG                                                           | SA-105-N     | 165#   |
| 41   | 1     | M1         | 20" x 150# RF BLIND FLG                                                       | SA-105-N     | 285#   |
| 42   | 1     | M1         | 20" x 150# RF FLEX GASKET                                                     | 304SS        | -      |
| 43   | 1     | M1         | 20" PIPE SCH STD x 10 1/8" LG (CBE)                                           | SA-106-B     | 66#    |
| 44   | 1     | M1         | 20" DAVIT ARM                                                                 | -            | 25#    |
| 45   | 20    | M1         | 1 1/8" DIA x 6 1/4" LG STUD                                                   | SA-193-B7M   | -      |
| 46   | 40    | M1         | 1 1/8" DIA NUT                                                                | SA-194-2HM   | -      |
| 47   | 2     | INSULATION | 1 1/2" x 12'-4" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM ONE SIDE (CURFS) | -            | -      |
| 48   | 1     | INSULATION | 1 1/2" x 12'-6" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM ONE SIDE         | -            | -      |
| 48   | 2     | INSULATION | 1 1/2" x 7'-0" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM BOTH SIDES        | -            | -      |
| 49   | 7     | INSULATION | 1 1/2" x 8'-0" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM BOTH SIDES        | -            | -      |
| 50   | 60 FT | INSULATION | SEA "L" FLASHING                                                              | -            | -      |
| 51   | 600   | INSULATION | SCREWS - #8 - 1/2" STAINLESS STEEL                                            | -            | -      |
| 52   | 1     | N5B        | 2" PIPE SCH 160 x 8 3/4" LG (BOE,COE)                                         | SA-106-B     | -      |
| 53   | 1     | N7         | 2" x 150# RF BLIND FLG, TAPPED TO 1"                                          | SA-105-N     | 8#     |
| 54   | 1     | C2         | 1/2" x 2000# THRD TEE                                                         | SA-105-N     | 1#     |
| 55   | 1     | C2         | 1/2" PIPE SCH XH x 2'-10" LG (TBE)                                            | SA-105-N     | 1#     |
| 56   | 1     | C2A        | 1/2" PIPE SCH XH x 3" LG (TOE,COE)                                            | SA-106-B     | 1#     |
| 57   | 3     | N3         | 2" x CLASS 900 RFWN FLG SCH XH                                                | SA-105-N     | -      |
| 58   | 3     | N3         | 2" x CLASS 900 RF FLEX GASKET                                                 | 304SS        | -      |
| 59   | 1     | N3         | 2" PIPE SCH XH x 3 3/4" LG (BBE)                                              | SA-106-B     | -      |
| 60   | 24    | N3         | 7/8" DIA x 5 3/4" LG STUD                                                     | SA-193-B7M   | -      |
| 61   | 48    | N3         | 7/8" DIA NUT                                                                  | SA-194-2HM   | -      |
| 62   | 1     | N3         | 2" x CLASS 900 RFSO FLG                                                       | SA-105-N     | -      |



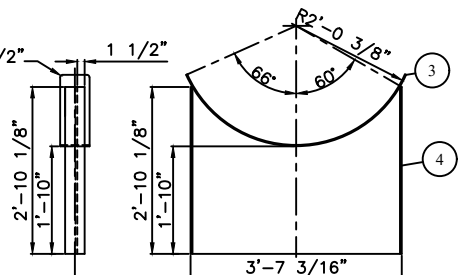
PUMPOUT SPOOL LAYOUT



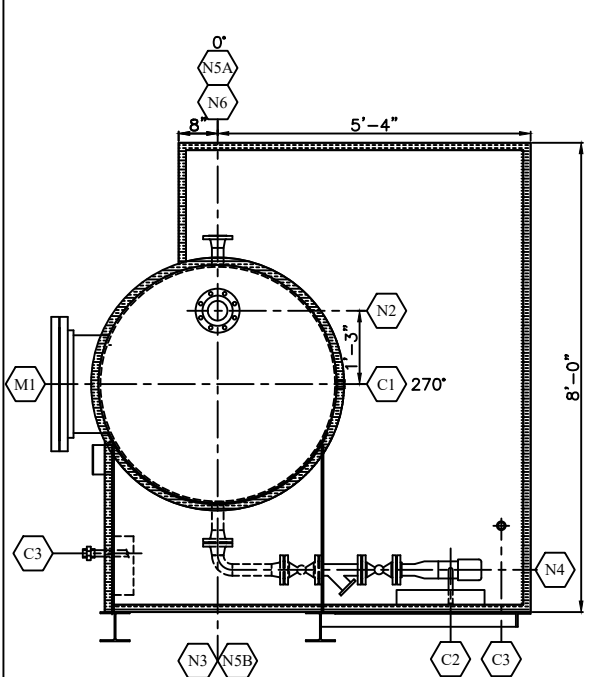
VORTEX BREAKER



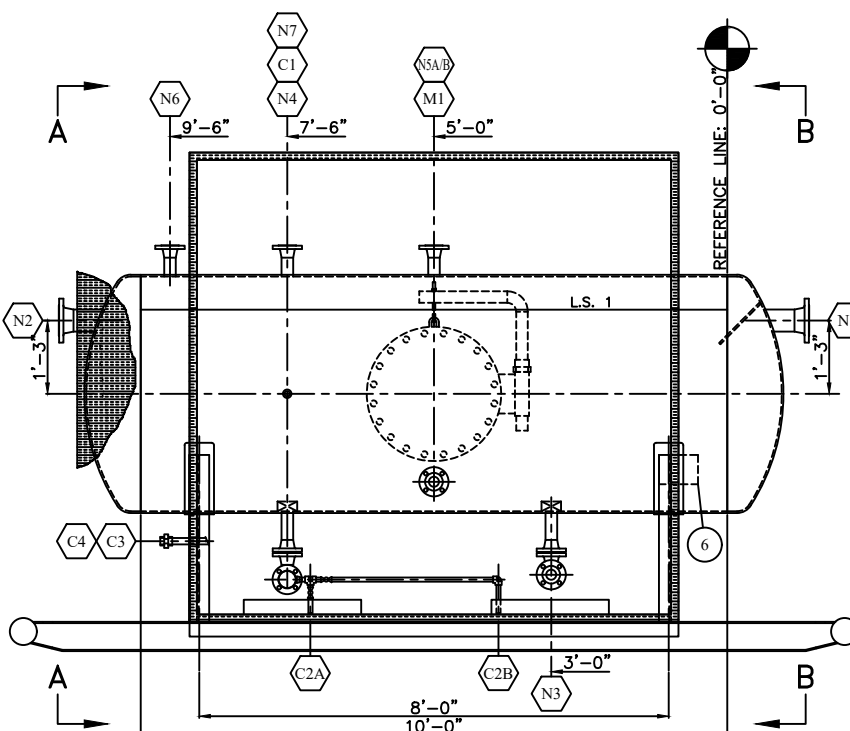
WEB PLATE DETAIL



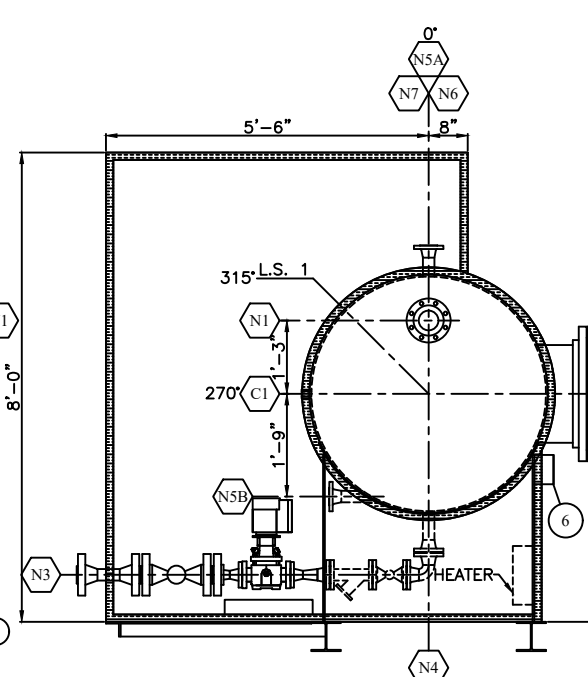
SADDLE DETAILS



ORIENTATION VIEW A-A



ELEVATION VIEW



ORIENTATION VIEW B-B

| WELD DETAIL NUMBER | REGISTERED WELDING PROCEDURE NUMBER |                |                | BACKWELD/GOUGE |
|--------------------|-------------------------------------|----------------|----------------|----------------|
|                    | ROOT                                | HOT PASS       | FILL & CAP     |                |
| 1,2,3,4,7          | BWM-019 (GMAW)                      | BWM-019 (GMAW) | BWM-019 (GMAW) | N/A            |
| 5                  | N/A                                 | N/A            | BWM-018 (SMAW) | N/A            |
| 6                  | BWM-019 (GMAW)                      | BWM-003 (SAW)  | BWM-003 (SAW)  | N/A            |

| 1                                                                | 2                             | 3                                                                                                  | 4               | 5                    | 6                                                 | 7               |
|------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------|-----------------|----------------------|---------------------------------------------------|-----------------|
| WELD NECK FLANGE                                                 | THREDOLET                     | NOZZLE NECK                                                                                        | ATTACHMENTS     | STAINLESS ATTACHMENT | CIRC & LONG SEAMS                                 | SLIP ON FLANGE  |
|                                                                  |                               |                                                                                                    |                 |                      |                                                   |                 |
| $\alpha=75^{\circ}(15^{\circ})$<br>$G=1/8^{\circ}(1/16^{\circ})$ | $G=1/8^{\circ}(1/16^{\circ})$ | $\alpha=40^{\circ}(15^{\circ})$<br>$G=1/8^{\circ}(1/16^{\circ})$<br>$h=1/16^{\circ}(1/16^{\circ})$ | $T=1/4^{\circ}$ | $1/4^{\circ}$        | $W=1/8^{\circ}(1/16^{\circ})$<br>$h=3/32^{\circ}$ | $T=1/4^{\circ}$ |

| REV. NO. | DATE     | REVISION                                  | BY  | APP'D |
|----------|----------|-------------------------------------------|-----|-------|
| A        | 01/17/05 | ISSUED FOR APPROVAL                       | DSG |       |
| 0        | 01/21/05 | ISSUED FOR FABRICATION                    | DSG | JAM   |
| 1        | 03/30/05 | ADD VESSEL WEIGHT AND UPDATE CODE EDITION | JAM | JAM   |
| 2        | 06/20/05 | AS BUILT DRAWING                          | DSG | JAM   |
| 3        | 09/26/05 | REVISED PUMPOUT LINE AS PER REQUEST       | DSG |       |

**BILTON**  
Welding & Manufacturing Ltd.

BOX 6106  
5815 37 Street  
INNISFAIR, AB  
CANADA  
403-227-7799  
1-888-227-4923  
FAX 227-7796

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# DESIGN SPECIFICATIONS

|                                                                                        |
|----------------------------------------------------------------------------------------|
| DESIGN & FABRICATE TO: 2004 EDITION ASME BOILER & PRESSURE VESSEL CODE SEC VIII, DIV 1 |
| DESIGN PRESSURE & TEMPERATURE: 50 PSI @ 100°F                                          |
| MINIMUM DESIGN METAL TEMP: -20°F @ 50 PSI                                              |
| IMPACT TESTS: EXEMPT AS PER UG-20(f)(1-5)                                              |
| RADIOGRAPHY: RT-1 AS PER UW-11(g) (AS REQUESTED)                                       |
| POST WELD HEAT TREATMENT: NONE AS PER UCS-56                                           |
| HYDROSTATIC TEST PRESSURE: 75 PSIG PREHEAT: 50°F                                       |
| CORROSION ALLOWANCE: 1/8" MAWP: 50 PSI @ 100°F                                         |
| HEAD THK. MIN: 0.3130" VOLUME: 147 CuFt. 4.15 Cum.                                     |
| WEIGHT EMPTY: 4,800 LBS WEIGHT FULL: 14,000 LBS                                        |

|                                             |               |  |        |
|---------------------------------------------|---------------|--|--------|
| CONOCOPHILLIPS CANADA                       |               |  |        |
| 25 BBL SINGLE WALL L.P. FLARE KNOCKOUT DRUM |               |  |        |
| 48" ID x 10'-0" S/S x 50 PSI MAWP           |               |  |        |
| DATE: 01/17/05                              | SHEET: 1 OF 4 |  |        |
| SCALE: N.T.S.                               | JOB NO.:      |  |        |
| DRAWN BY: DSG                               | B341          |  | SIZE D |
| PURCHASE ORDER: 4504478727                  | DRAWING NO.:  |  | REV.   |
| LOCATION: 06-03-62-12 W6M                   | B341-1        |  | 3      |
| CRN DWG: BWM-102-04 R3                      | APP'D JAM     |  |        |
| CRN NUMBER: R6386.2                         |               |  |        |