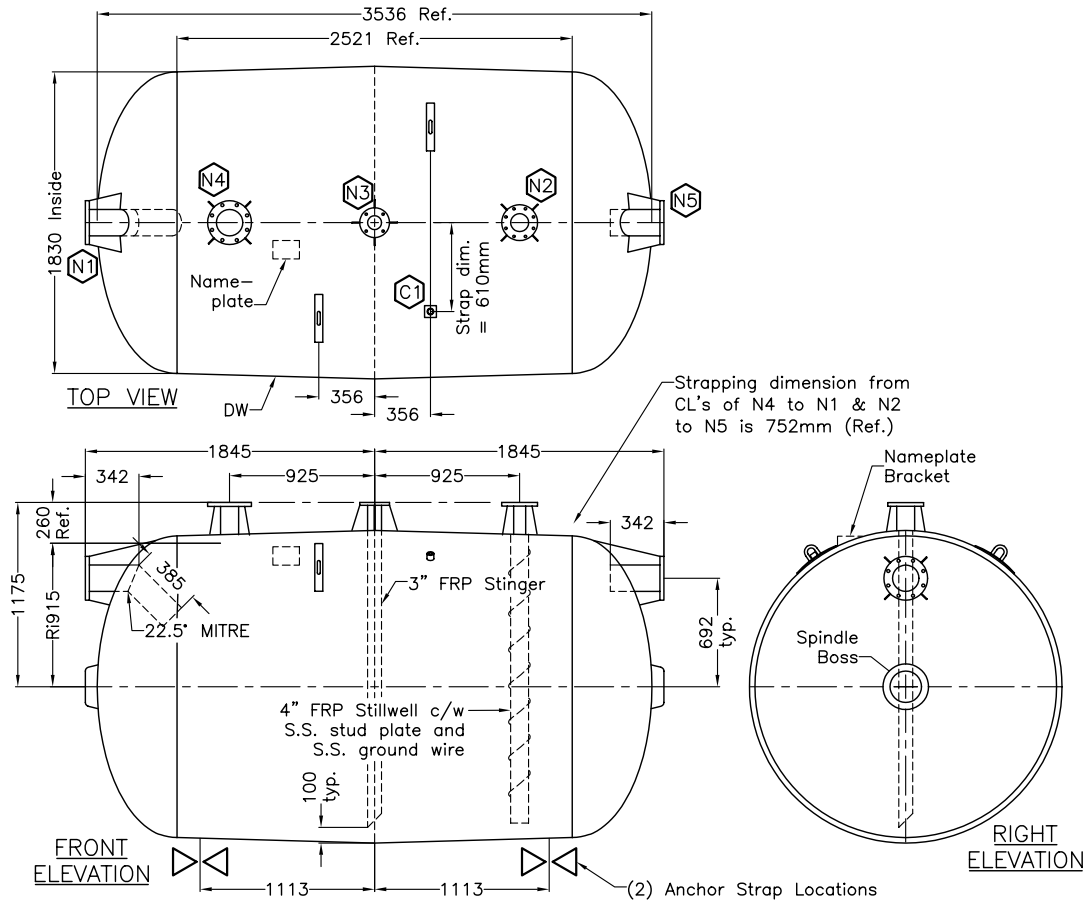


LOC.	NPS SIZE	RATING	SERVICE	* BOLT TORQUE	DESCRIPTION
-	2"	125 lb	-	25 ft.lb	FF FRP ANSI FLG
N3	3"	50 lb	PUMPOUT	25 ft.lb	FF FRP ANSI FLG
N2	4"	50 lb	LEVEL	25 ft.lb	FF FRP ANSI FLG
N1,N4,N5	6"	50 lb	INLET,PRESSURE RELIEF,OUTLET	25 ft.lb	FF FRP ANSI FLG
-	8"	100 lb	-	25 ft.lb	FF FRP ANSI FLG
-	10"	50 lb	-	25 ft.lb	FF FRP ANSI FLG
C1	1"	N/A	VACUUM LEAK INDICATOR	N/A	NPT STL FULL CPLG

NOTES:

1. ALL FLANGES ARE DRILLED TO MATCH 150# ANSI B16.5 BOLT PATTERN.
2. INLETS/OUTLETS/PRESSURE RELIEF MAY BE 4", 6", 8", OR 10" I.D.
3. THE COMBINED AREAS OF OUTLET AND PRESSURE RELIEF NOZZLES SHALL EXCEED THE AREA OF THE INLET NOZZLE BY AT LEAST 33%.
4. ALL CONNECTIONS SHALL BE FRP FLANGES ONLY, NO METAL FITTINGS EXCEPT ON THE SECONDARY CONTAINMENT. MATING FLANGES MAY BE FLAT FACE OR RAISED FACE. RAISED FACE FLANGES MUST BE PROVIDED WITH A $\frac{1}{8}$ " THICK SUPPORT RING OF THE SAME MATERIAL AS THE FLANGE GASKET. UNLESS NOTED OTHERWISE, GASKETS TO BE NITRILE 55-65 DUROMETER (SHORE A).
5. TANK TO BE SHIPPED WITH INTERSTITIAL SPACE VACUUM MONITORED.
6. ZCL TO SUPPLY 20'-0" LG. GROUND WIRE WITH TANK. CUSTOMER TO CONNECT GROUND WIRE WITH STUD ON N2 AND THEN TO GROUND ROD AT SURFACE.
7. REFER TO SHEET 'B' FOR FABRICATION DETAILS.



DESIGN CODE: NON-CODE VESSEL
 DESIGN INTERNAL PRESSURE: 50 PSI
 DESIGN EXTERNAL PRESSURE: ATMOSPHERIC
 DESIGN SPECIFIC GRAVITY: 1.2
 MAX. OPERATING TEMPERATURE: 150°F
 MIN. OPERATING TEMPERATURE: -20°F (-40°F WITH L7 STUDS / NUTS)
 HYDROSTATIC TEST PRESSURE: 75 PSI (OPTIONAL)
 CAPACITY: 8267 litres
 WEIGHT EMPTY: 1300 kg.
 WEIGHT FULL: 11220 kg.
 CHEMICAL COMPATIBILITY: WATER, NATURAL GAS CONDENSATE, CRUDE OIL, BRINE, HYDROGEN SULPHIDE.

REFERENCE DRAWINGS

1. VACUUM GAUGE ASSEMBLY M/E/8084
2. VACUUM GAUGE HOUSING M/E/7251

RECOMMENDED ACCESSORIES

- 1. LEVEL GAUGE UG-60-M
- 2. INVERTED 'T' CONCRETE ANCHORS M/E/7874
- 3. STAINLESS STEEL FLEX CONN. N/A
- 4. LEVEL RISER M/E/7243
- 5. PUMPOUT RISER M/E/7244
- 6. PRESSURE RELIEF RISER M/E/7242

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
 DIMENSIONS ARE NOMINAL - SEE REFERENCE DOCUMENT IRD2-15 FOR FABRICATION TOLERANCES.

INSTALLATION MUST BE IN ACCORDANCE WITH ZCL INSTALLATION INSTRUCTIONS.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ZCL COMPOSITES INC.. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF ZCL COMPOSITES INC. IS PROHIBITED.

DRAWING NO.: M/E/7200.9

DRAWN: LJB DATE: JUL 25/01 SCALE: N.T.S.

APPD: DATE: SHEET: A

REV. DATE: MAR 18/04 REVISION: RELOCATED C1

TITLE: 50 PSI DOUBLE WALL U/G FILAMENT WOUND VESSEL 50 bbl (STANDARD)

CLIENT:

ZCL
COMPOSITES INC.

Ph: 780-466-6648

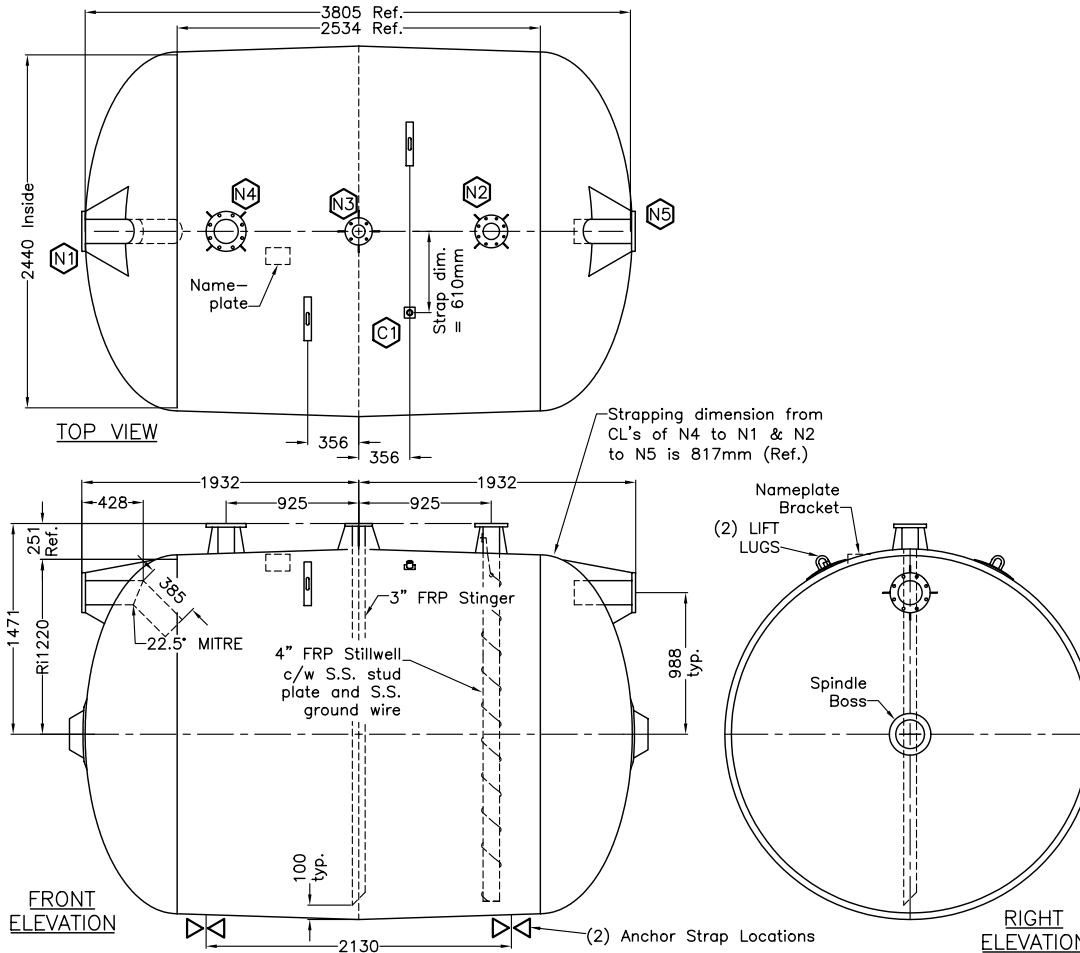
Fax: 780-466-6126

AUTHORIZED TO PROCEED WITH CONSTRUCTION

BY _____ DATE _____

LOC.	NPS SIZE	RATING	SERVICE	* BOLT TORQUE	DESCRIPTION
-	2"	125 lb	-	25 ft.lb	FF FRP ANSI FLG
N3	3"	50 lb	PUMPOUT	25 ft.lb	FF FRP ANSI FLG
N2	4"	50 lb	LEVEL	25 ft.lb	FF FRP ANSI FLG
N1,N4,N5	6"	50 lb	INLET,PRESSURE RELIEF,OUTLET	25 ft.lb	FF FRP ANSI FLG
-	8"	100 lb	-	25 ft.lb	FF FRP ANSI FLG
-	10"	50 lb	-	25 ft.lb	FF FRP ANSI FLG
C1	1"	N/A	VACUUM LEAK INDICATOR	N/A	NPT STL FULL CPLG

* Torque required for PTFE lubricated bolts



NOTES:

1. ALL FLANGES ARE DRILLED TO MATCH 150# ANSI B16.5 BOLT PATTERN.
2. INLETS/OUTLETS/PRESSURE RELIEF MAY BE 4", 6", 8", OR 10" I.D.
3. THE COMBINED AREAS OF OUTLET AND PRESSURE RELIEF NOZZLES SHALL EXCEED THE AREA OF THE INLET NOZZLE BY AT LEAST 33%.
4. ALL CONNECTIONS SHALL BE FRP FLANGES ONLY, NO METAL FITTINGS EXCEPT ON THE SECONDARY CONTAINMENT. MATING FLANGES MAY BE FLAT FACE OR RAISED FACE. RAISED FACE FLANGES MUST BE PROVIDED WITH A 1/8" THICK SUPPORT RING OF THE SAME MATERIAL AS THE FLANGE GASKET. UNLESS NOTED OTHERWISE, GASKETS TO BE NITRILE 55-65 DUROMETER (SHORE A).
5. TANK TO BE SHIPPED WITH INTERSTITIAL SPACE VACUUM MONITORED.
6. ZCL TO SUPPLY 20'-0" LG. GROUND WIRE WITH TANK, CUSTOMER TO CONNECT WIRE TO GROUND STUD ON N2 AND THEN TO GROUND ROD AT SURFACE.
7. REFER TO SHEET 'B' FOR FABRICATION DETAILS.

DESIGN CODE: NON-CODE VESSEL
 DESIGN INTERNAL PRESSURE: 50 PSI
 DESIGN EXTERNAL PRESSURE: ATMOSPHERIC
 DESIGN SPECIFIC GRAVITY: 1.2
 MAX. OPERATING TEMPERATURE: 150°F
 MIN. OPERATING TEMPERATURE: -20°F (-40°F WITH L7 STUDS / NUTS)
 HYDROSTATIC TEST PRESSURE: 75 PSI (OPTIONAL)
 CAPACITY: 15750 litres
 WEIGHT EMPTY: 2000 kg.
 WEIGHT FULL: 20900 kg.
 CHEMICAL COMPATIBILITY: WATER, NATURAL GAS CONDENSATE, CRUDE OIL, BRINE, HYDROGEN SULPHIDE.

REFERENCE DRAWINGS

1. VACUUM GAUGE ASSEMBLY M/E/8084
2. VACUUM GAUGE HOUSING M/E/7251

RECOMMENDED ACCESSORIES

- 1. LEVEL GAUGE UG-86-M
- 2. INVERTED 'T' CONCRETE ANCHORS M/E/7875
- 3. STAINLESS STEEL FLEX CONN. N/A
- 4. LEVEL RISER M/E/7243
- 5. PUMPOUT RISER M/E/7244
- 6. PRESSURE RELIEF RISER M/E/7242

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
 DIMENSIONS ARE NOMINAL - SEE REFERENCE DOCUMENT IRD2-15 FOR FABRICATION TOLERANCES.
 INSTALLATION MUST BE IN ACCORDANCE WITH ZCL INSTALLATION INSTRUCTIONS.
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ZCL COMPOSITES INC.. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF ZCL COMPOSITES INC. IS PROHIBITED.

DRAWING NO.: M/E/7329.5		
DRAWN: RRS	DATE: AUG 09/01	SCALE: N.T.S.
APPD:	DATE:	SHEET: A
REV. DATE: MAR 18/04		REVISION: RELOCATED C1

TITLE: 50 PSI DOUBLE WALL U/G FILAMENT WOUND VESSEL 99 bbl (STANDARD)	CLIENT:
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ZCL COMPOSITES INC. Ph: 780-466-6648 Fax: 780-466-6126
 AUTHORIZED TO PROCEED WITH CONSTRUCTION
 BY _____ DATE _____