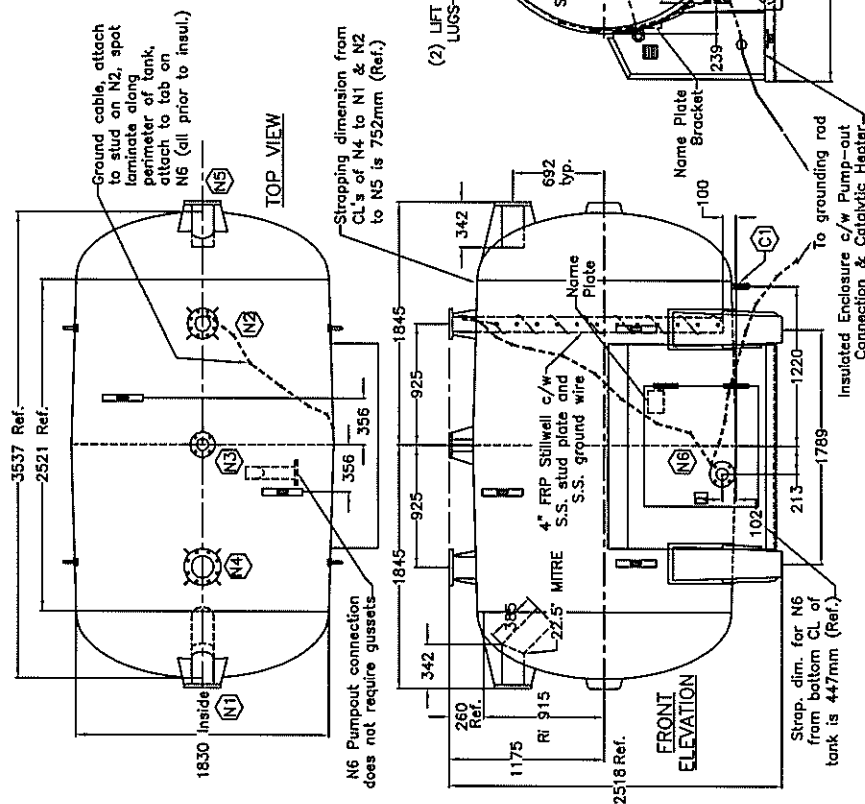


LOC.	NPS SIZE	RATING	SERVICE	* BOLT TORQUE	DESCRIPTION
-	2"	125 lb	-	25 ft.lb	FF FRP ANSI FLG
N3,N6	3"	50 lb	SPARE,PUMPOUT	25 ft.lb	FF FRP ANSI FLG
N2	4"	50 lb	LEVEL	25 ft.lb	FF FRP ANSI FLG
N1,N4,N5	6"	50 lb	INLET,PRESSURE RELIEF,OUTLET	25 ft.lb	FF FRP ANSI FLG
-	8"	100 lb	-	25 ft.lb	FF FRP ANSI FLG
-	10"	50 lb	-	25 ft.lb	FF FRP ANSI FLG
C1	1"	N/A	LEAK INDICATOR	N/A	NPT STL FULL CPLG

\* Torque required for PTFE lubricated bolts



NOTES:  
 1. ALL EXTERIOR SURFACES SHALL BE U.V. PROTECTED.  
 2. ALL FLANGES ARE DRILLED TO MATCH 150# ANSI B16.5 BOLT PATTERN.  
 3. INLETS/OUTLETS/PRESSURE RELIEF MAY BE 4", 6", 8", OR 10" I.D.  
 4. THE COMBINED AREAS OF OUTLET AND PRESSURE RELIEF NOZZLES SHALL EXCEED THE AREA OF THE INLET NOZZLE BY AT LEAST 33%.  
 5. 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).  
 6. REFER TO SHEET 'B' FOR FABRICATION DETAILS.

DESIGN CODE: NON-CODE VESSEL  
 DESIGN INTERNAL PRESSURE: 15 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: 50 PSI (OPTIONAL)  
 CAPACITY: 8267 litres  
 WEIGHT EMPTY: 1400 kg.  
 WEIGHT FULL: 11320 kg.  
 CHEMICAL COMPATIBILITY: WATER, NATURAL GAS CONDENSATE, CRUDE OIL, HYDROGEN SULPHIDE.  
 INSULATION: 50mm URETHANE FOAM  
 FINISH: GREEN ELASTOMERIC COATING.

- REFERENCE DRAWINGS**
- 3" PUMPOUT ASSEMBLY M/E/7309
  - INSULATED HOUSING M/E/7699
  - FRAME FOR INSULATED HOUSING M/E/7700
  - SADDLE ASSEMBLY M/E/7725
  - HEATER SUPPORT BRACKETS M/E/4825
  - DRIP PAN ASSEMBLY M/E/4837
  - PIPING BRACE ASSEMBLY M/E/4826
  - STL ASSEMBLY M/E/7697
- RECOMMENDED ACCESSORIES**
- 1. LEVEL GAUGE HP-60-M
  - 2. PRECAST CONCRETE PAD M/E/7703
  - 3. STAINLESS STEEL FLEX CONNECTORS

RIGHT ELEVATION

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/7675.6  
 SCALE: N.T.S.  
 DATE: NOV 03/01  
 DRAWN: LJB  
 APPD: [ ]  
 REV. DATE: APR 05/07  
 REVISION: REVISED REF NO. FOR ITEM #1. - LB

TITLE: 15 PSI DOUBLE WALL A/G FILAMENT WOUND VESSEL 50 bbl (STANDARD)  
 CLIENT: A

ZCL COMPOSITES INC.  
 AUTHORIZED TO PROCEED WITH CONSTRUCTION

Ph: 780-466-6648  
 Fax: 780-466-6126

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**Design Specification:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Description:** ZCL Double Wall Flare Knock-out Vessel (50 barrel)  
**Reference Drawing:** M/E/7675  
**Design Data:**  
Code: Non-code, not registered  
(Design reference: ASME Section X, 1998, 2000 Addenda)  
Design Internal Pressure: 15 psi Design Temperature: 150°F  
Design External Pressure: Not Applicable  
Operating Pressure: Atmospheric Minimum Design Temperature: -20 °F  
Nominal Capacity: 8000 litres Design s.g. of contents: 1.2

**Laminates:** Corrosion Barrier shall be compatible with water, natural gas condensate, crude oil, brine, hydrogen sulfide.

**Vessel Support:** The vessel shall be supported in the horizontal orientation on two support saddles

**Connections:** All nozzles are penetrating type with integral full face FRP flanges drilled to match an ANSI B16.5 Class 150 bolting pattern. A 1/8" Nitrile gasket (maximum hardness 65 Durometer) shall be used for all flanged connections. A 1/16" Nitrile adapter ring is also required for any flanged joint where the mating flange has a raised face.

<u>Mk</u>	<u>Size</u>	<u>Rating</u>	<u>Type</u>	<u>Service</u>
M1	20"	50#	Full Face c/w Blind Flange	Manway (optional)
N1	6"	50#	Full Face	Inlet
N2	4"	50#	Full Face	Level Gauge
N3	3"	50#	Full Face	Spare
N4	6"	50#	Full Face	Emergency Vent
N5	6"	50#	Full Face	Outlet
N6	3"	50#	Full Face	Pump-out
C1	1"	N/A	NPT	Interstice Monitor

**Remarks:**

- The vessel shall be of double wall construction with an interstitial space between the two walls, monitored by float type leak indicator.
- Flexible connectors are required for inlet and outlet connections.
- The vessel must be installed in accordance with the manufacturer's installation instructions.
- The user shall be responsible for specifying the size of the pressure relief nozzle. The user shall ensure that a pressure relief device meeting the requirements of ASME Section IV, Article 4 or Section VIII, Division 1, UG-125 through UG-136 is in place at all times when the vessel is in service.
- Discharge lines from pressure relief devices shall meet the requirements of ASME Section X, RR-220.
- The vessel shall be provided with a grounding system to drain electrostatic charge from the liquid surface. This grounding system will consist of an internal stainless steel wire electrode spanning between the bottom and the top of the vessel and connected to a threaded stud projecting from the exterior of nozzle N2. A copper grounding wire on the exterior of the vessel bonds this stud to the pump-out nozzle with sufficient excess length provided for field connection to an earthed grounding rod.