



DATE		REV	DESCRIPTION	ENGINEER	APP
20 NOV 2013		A	PRELIMINARY DESIGN	KM	MM
29 NOV 2013		B	PER INTERNAL DESIGN REVIEW	KM	MM
14 FEB 2014		C	FOR APPROVAL	KM	MM
25 MAR 2014		D	UPDATED TO COMMENTS - FOR APPROVAL	KM	MM
09 APR 2014		0	FOR CONSTRUCTION	KM	MM
25 JUL 2014		1	AS BUILT	KS	KM
03 SEP 2014		2	AS BUILT POST-FAT	KM	RME

Design Data	Vessel	Jacket	Surface Finish
Design Pressure (Bar(g))	6	6	Surface Internal
Design Vacuum (Bar(g))	FV	FV	Surface External
Design Temp Max (°C)	150	150	Welds Internal
Design Temp Min (°C)	0	0	Welds External
Working Pressure Max (Bar(g))	5	5	Third Party / NOBO
Working Pressure Min (Bar(g))	-0.1	Atm	NDT
Working Temp Max (°C)	130	100	Radiography Weld 7j
Working Temp Min (°C)	6	6	Dye Penetrant
Contents	Compounds	Steam & Water	Hydrostatic Test (Bar(g))
Density of Content (kg/m³)	1,000	1,000	Drainability Test
Nominal Capacity (L)	4,000	119	Note J
Capacity Full (L)	4,491	119	Empty Weight (kg)

Phase	Medium	Classification	ATEX
PED 97/23/EC Data	Vessel	Jacket	ATEX 94/9/EC
External Classification	GRAS	GRAS	External Classification
PED Medium Group	I	2	Internal Classification
PED Category	IV	II	Wind Speed
Conformity Module	G	G	Agitator Run Test
Design Code	Intent of ASME VIII Div.1, 2010		EN Inspection Category

General Notes

A: All Nozzles to be covered prior to shipping

B: De-burr all sharp edges

C: All patch plates to have MS weep holes.

D: Corrosion allowance is nil

E: Bolt holes to straddle vertical & horizontal centre lines.

F: Radiography: 10% Vessel Welds (Including 100% Tee's). For additional welding & NDT information refer to Weld Map PVGE006-WMD-003 and Weld Log PVGE006-NDT-003

G: Dye Penetrant Testing: 100% Nozzles, 10% Attachments by Third Party.

H: Filler Wire to be 90L on all product contact welds, and 316L on all attachment welds. For Weld Procedures refer to Weld Map PVGE006-WMD-003

I: Vessel Shell, Bottom Dish are to be painted with Easterns Anti-Chloride Barrier paint, Thermolux 57-73, as they will be covered with insulation.

J: Vessel Bottom Dish will not be fully drainable unless Nozzle N18 Product Inlet Valve is open.

EQUIPMENT SCHEDULE	
NOZZLE GASKETS	EPDM
MANWAY O-RING	EPDM
AGITATOR	MAVAG MDB600 BOTTOM MOUNTED MAG DRIVE AGITATOR
INLET & OUTLET VALVE	GEMU WELD-IN DIAPHRAGM VALVE
SIGHTGLASS	SIGHTGLASS TO DIN 28120 C/W BOROSILICATE GLASS TO DIN 7080, 150mm VIEWING DIAMETER
LIGHT	LIGHT NOT SUPPLIED WITH VESSEL
SPRAYBALL N1	STATIC TYPE - CUSTOM DRILLED INLINE SPRAYBALL FROM STAINLESS SOLUTIONS
SPRAYBALL N2	STATIC TYPE - CUSTOM DRILLED INLINE SPRAYBALL FROM STAINLESS SOLUTIONS
HIGH POINT VALVE	0.5" MANUAL BALL VALVE, BW-8W

NOZZLE ID	SERVICE	STANDARD	MATERIAL	SCHEDULE	TYPE	SIZE
N1	CIP INLET 1	A 182	(1.4435) 316L	HEAVY WALL TANK FERRULE	HEAVY WALL TANK FERRULE	3" x 1.5"
N2	CIP INLET 2	A 182	(1.4435) 316L	HEAVY WALL TANK FERRULE	HEAVY WALL TANK FERRULE	3" x 1.5"
N3	LEVEL	A 479	(1.4435) 316L	HEAVY WALL TANK FERRULE	HEAVY WALL TANK FERRULE	4"
N5	LIGHT	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	2"
N6	LEVEL SWITCH 1	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	2"
N7	PRESSURE	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	2"
N8	MANWAY	A 240	(1.4435) 316L	ZIMMERMANN MANWAY, 6mm NECK	ZIMMERMANN MANWAY, 6mm NECK	500mm
N8.1	SIGHTGLASS	A 479	(1.4435) 316L	HZ CONNECT 25mm THK (AS PART OF MANWAY)	HZ CONNECT 25mm THK (AS PART OF MANWAY)	6"
N9	BURSTING DISK	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK, C/W RELIEF LINE	NA CONNECT - 25mm WALL THK, C/W RELIEF LINE	1.5"
N10	FUTURE	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	2"
N11	AIR / VENT	A 182	(1.4435) 316L	HEAVY WALL TANK FERRULE	HEAVY WALL TANK FERRULE	1.5"
N12	FUTURE 2	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	2"
N13	JACKET OUTLET	A 182	304L	ANSI B16.5 150lb RF50 Flange	ANSI B16.5 150lb RF50 Flange	2"
N14	LEVEL SWITCH 2	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	2"
N15	SAMPLE PORT	A 479	(1.4435) 316L	NA CONNECT - 25mm WALL THK	NA CONNECT - 25mm WALL THK	1.5"
N17	JACKET INLET	A 182	304L	ANSI B16.5 150lb RF50 Flange	ANSI B16.5 150lb RF50 Flange	2"
N18	PRODUCT INLET	A 479	(1.4435) 316L	GEMU FLUSH MOUNTED DIAPHRAGM VALVE, 120mm	GEMU FLUSH MOUNTED DIAPHRAGM VALVE, 120mm	1"
N19	THERMOWELL	A 182	(1.4435) 316L	0.5" BSP(F) CONNECTION FROM Ø28mm FL BAR	0.5" BSP	0.5" BSP
N20	AGITATOR	A182	(1.4435) 316L	MAVAG BOTTOM MOUNTED AGI MDB600	MAVAG BOTTOM MOUNTED AGI MDB600	120mm
N24	PRODUCT OUTLET	A479	(1.4435) 316L	GEMU FLUSH MOUNTED DIAPHRAGM VALVE, 120mm	GEMU FLUSH MOUNTED DIAPHRAGM VALVE, 120mm	1"

NOZZLE ID	SERVICE	STANDARD	MATERIAL	SCHEDULE	TYPE	SIZE
1	TOP HEAD	A 240	(1.4435) 316L	10% TORISPHERICAL DISHED END	10% TORISPHERICAL DISHED END	9.1mm A/F
2	SHELL	A 240	(1.4435) 316L	1500mm HIGH SHELL x 1700mm ID	1500mm HIGH SHELL x 1700mm ID	6mm
3	BOTTOM HEAD	A 240	(1.4435) 316L	10% TORISPHERICAL DISHED END	10% TORISPHERICAL DISHED END	9.3mm A/F
4	LIMPET COIL	A 240	304L	3mm LIMPET COIL ON BTM DISH AND SHELL	3mm LIMPET COIL ON BTM DISH AND SHELL	3"

Unless otherwise specified, dimensions are in 'mm' & tolerance are:

None +/- .5

0" +/- 1

Job Number: PVGE006

Drawn By: K. Mahon

Date: 20 NOV 2013

Checked By: M. MADDEN

Date: 25 NOV 2013

Scale: N.T.S.

GENZYME

4,000L FILTRATE VESSEL

TAG NO: VSL-903

Dwg. No.: PVGE006-GAD-003

Rev: 2

RAILWAY ROAD, CHARLEVILLE, CO. CORK, IRELAND

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