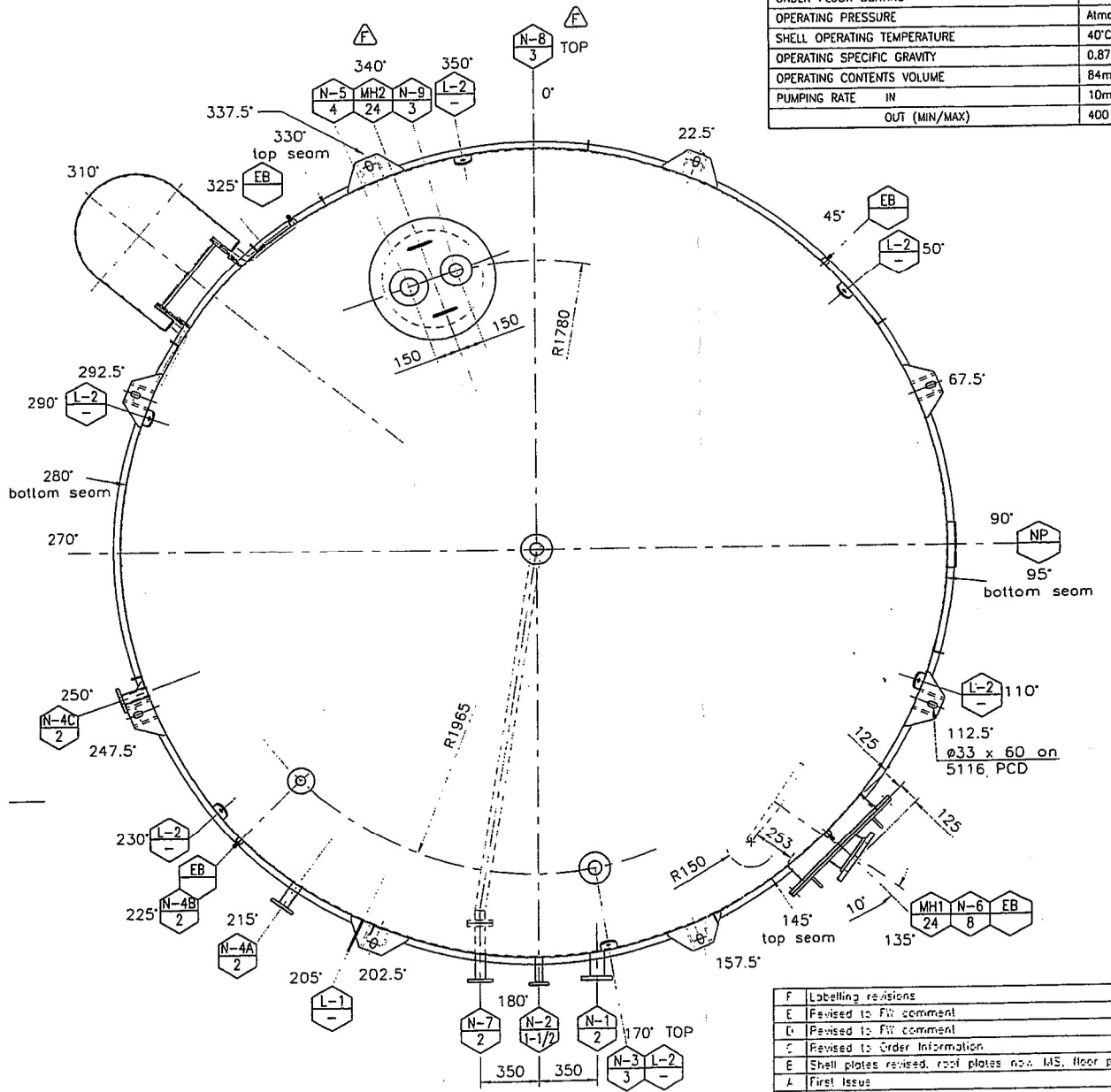


Item	Description	Qty	Thick	Width	Length	Material	Form
1	Floor Plate	2	8	2524	4988	AS 3678 Gr250	Plate
2	Sump	1	STD	500		ASTM A234 WPB	ANSI B16.9 Pipe Cap
3	Deleted						
B 5	Shell Plate	1	8	2975	8000	AS 3678 Gr250	Plate
B 6	Shell Plate	1	8	2975	7413	AS 3678 Gr250	Plate
B 7	Shell Plate	2	6	2975	8000	AS 3678 Gr250	Plate
B 8	Shell Plate	1	6	2975	7413	AS 3678 Gr250	Plate
B 9							
B 10							
11	Kerb Angle	1	6	50x50	15235	AS 3679 Gr250	Hot rolled angle
B 13	Roof Plate	1	6	2479	4958	AS 3678 Gr250	Plate
B 14	Roof Plate	1	6	2519	4958	AS 3678 Gr250	Plate
B 15	Roof Plate	1	6	φ500		AS 3678 Gr250	Plate

DESIGN DATA	
DESIGN CODES	API 650 10th Edition App J, API 2000
CUSTOMER SPECIFICATIONS	DEP 34.51.01.31, FW13350-B430-05-0029, 13350-14A1, NZRC MC-201
LOCATION	MARSDEN POINT, WHANGAREI
CONTENTS	Infinum R655, Kerosene
DESIGN PRESSURE	MAX/MIN 7.5 mborg/-2.5 mborg
SHELL DESIGN TEMPERATURE	MAX/MIN 50°C
DESIGN SPECIFIC GRAVITY	0.87
VOLUME	113m ³
SEISMIC LOAD	Impulsive 0.085, Convective 0.034
WIND LOAD	59 m/s
RADIOGRAPHY / OTHER N.D.T.	SPOT
JOINT EFFICIENCY	0.85 (Shell)
CORROSION ALLOWANCE	0 mm
HEAT TREATMENT	Nil
MATERIAL SHELL/ENDS	CS
MATERIAL NOZZLES	CS
GASKETS FOR NOZZLES EXTERNAL	Spiral wound SS316L, graphite filled, with SS inner ring and CS outer ring.
GASKETS FOR MANWAYS AND INTERNAL JOINTS	CAF (Asbestos free)
EXTERNAL INSULATION	Nil
INTERNAL LINING	Nil
EXTERNAL SURFACE TREATMENT	NZRC EW-020-206 System 2
INTERNAL SURFACE TREATMENT	Nil
UNDER FLOOR COATING	Blast to SA 2.5, 2 coats 150 um DFT Cool Tor Epoxy
OPERATING PRESSURE	Atmospheric
SHELL OPERATING TEMPERATURE	40°C
OPERATING SPECIFIC GRAVITY	0.87
OPERATING CONTENTS VOLUME	84m ³
PUMPING RATE	IN 10m ³ /hr
	OUT (MIN/MAX) 400 l/hr / 600 l/hr

WEIGHTS AND LOADS	
MASS - BARE / EMPTY / DESIGN / HYDRO	8,200 / 8,200 / 100,000 / 116,000 kg
SUPPORT LOADS	
STATIC MAX/NORMAL	1,150 kN / 1,000 kN
SEISMIC	
ULTIMATE LS Vertical/Horizontal/Moment/Bolt	1,000 kN / 80 kN / 210 kNm / 15 kN
SERVICEABILITY LS Vertical/Horizontal/Moment/Bolt	1,000 kN / 35 kN / 100 kNm / 1 kN
WIND	
ULTIMATE LS Vertical/Horizontal/Moment/Bolt	80 kN / 41 kN / 130 kNm / 5 kN
SERVICEABILITY LS Vertical/Horizontal/Moment/Bolt	80 kN / 32 kN / 100 kNm / 1 kN



MARK	NPS	QTY	END	DESC.	RTC	SERVICE	Radial Forces (kN)	Axial Moments (kNm)	Tangl Moments (kNm)	DRG/SHT
NP	-	1	-	Name Plate	-	-	-	-	-	Sheet 6
EL	-	4	-	Earthing Lugs	-	-	-	-	-	Sheet 6
L-2	-	6	-	Lifting lug	10	20	0	0	0	0.15
L-1	-	2	-	Clips	-	-	-	-	-	Sheet 6
N-9	3	1	B16.5	RF	150	Level Alarm	-	-	-	Sheet 5
N-8	3	1	B16.5	RF	150	Free Vent	-	-	-	Sheet 4
N-7	2	1	B16.5	RF	150	Drain	-	-	-	Sheet 5
N-6	8	1	B16.5	RF	150	Mixer	1.5	3.3	1.5	0.17
N-5	4	1	B16.5	RF	150	Dip hatch	-	-	-	Sheet 5
N-4c	2	1	B16.5	RF	150	Spare	-	-	-	Sheet 5
N-4b	2	1	B16.5	RF	150	Spare	-	-	-	Sheet 5
N-4a	2	1	B16.5	RF	150	Spare	-	-	-	Sheet 5
N-3	3	1	B16.5	RF	150	Level indicator	-	-	-	Sheet 5
N-2	1-1/2	1	B16.5	RF	150	Outlet	-	-	-	Sheet 5
N-2	2	1	B16.5	RF	150	Inlet	-	-	-	Sheet 5
MH-2	24	2	-	Roof Manhole	-	-	-	-	-	Sheet 7
MH-1	24	1	-	Shell Manhole	1.5	3.3	1.5	0.17	1.5	1.5

FOSTER WHEELER INTERNATIONAL CORPORATION
 THE NEW ZEALAND REFINING COMPANY LTD
 MARSDEN POINT, WHANGAREI, NEW ZEALAND
 NEW ZEALAND FUTURE FUELS PROJECT 3016

EQUIPMENT TITLE
 LUBRICITY ADDITIVE TANK

PROJECT NO. 13350/9
VENDOR DOC. NO. 301237D-01/01
VENDOR REV. F

P.O. NUMBER 291002/13350
REQ'D NO. 13356-1141A001
EQUIP. ITEM T-154

FW DOC. TYPE G15
DSN 1861
FW REV. 4
CLIENT DOCUMENT NO. T-3034930

STATUS 4
ENGINEER KARARUIT
DEPT S&E
DATE 15/2/24

COMMENT STATUS CODE
 1-Corrected document to be resubmitted before starting manufacture.
 2-Revise and resubmit, work may proceed once comments are included.
 3-Released for construction if changed as indicated.
 4-Released for construction

Note: Release of drawings in no way absolves vendors from responsibility for their accuracy, or for the design, construction and performance of the equipment.

- NOTES**
- All bolt holes to straddle tank centrelines
 - Steel UTS shall be not more than 510 MPa
 - All welds 6mm continuous fillet UNO.
 - Lifting strap length shall be in the range 6 to 10 m.

REFERENCE DRAWINGS	SHEET
Ladder & handrail	Sheet 2
Shell manhole & davit	Sheet 7
Roof manhole & davit	Sheet 7
Bracket, Name plate, Earthing boss, Support	Sheet 5
Nozzles	Sheet 5
Roof plate layout	Sheet 4
Shell	Sheet 3
Floor layout	Sheet 2
TITLE	OPERATING SHEET 1c

THE NEW ZEALAND REFINING CO LTD T-3034930
T-154 LUBRICITY ADDITIVE TANK
GENERAL ARRANGEMENT

Scale: 1 : 20 A1
 Drawing No. 301237D-01
 Sheet 1 of 9

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