



MECHANICAL DATA SHEET: VESSEL

PLANT ITEM No.
24590-LAW-MV-LOP-VSL-00001

Project:	RPP-WTP	P&ID:	24590-LAW-M6-LOP-P0001
Project No:	24590	Process Data Sheet:	
Project Site:	Hanford	Vessel Drawing	24590-LAW-MV-LOP-P0001
Description:	LAW Melter 1 SBS Condensate Vessel		

Reference Data

Charge Vessels (Tag Numbers)	Not Applicable
Pulsejet Mixers / Agitators (Tag Numbers)	24590-LAW-MY-LOP-EDUC-00001A
RFDs/Pumps (Tag Numbers)	Not Applicable

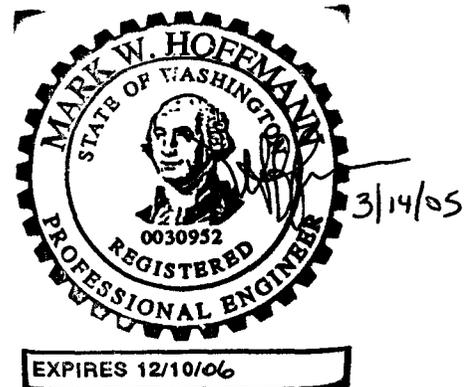
Design Data

Quality Level	QL-1		Fabrication Specs	24590-WTP-3PS-MV00-TP001 (PVDF)		
Seismic Category	SC-III		Design Code	ASME VIII Div 1		
Service/Contents	LAW Condensate		Code Stamp	Yes		
Design Specific Gravity	1.03		NB Registration	Yes		
Maximum Operating Volume	gal	7,402	Weights (lbs)	Empty	Operating	Test
Total Volume	gal	9,056	Estimated	25,500	91,700	100,800
			Actual *			

Inside Diameter	inch	144	Wind Design	Not Required		
Length/Height (TL-TL)	inch	98	Snow Design	Not Required		
			Seismic Design	24590-WTP-3PS-MV00-TP002 24590-WTP-3PS-FB01-T0001		
Internal Pressure	psig	2.00	Vessel Operating	15	Coil/Jacket Design	125
External Pressure	psig	2.00	Vessel Design	FV	Seismic Base Moment *	ft*lb
Temperature	°F	212	Coil/Jacket Design	237	Postweld Heat Treat	Not Required
Min. Design Metal Temp.	°F	40	Hydrostatic Test Pressure *	psig	Corrosion Allowance	Inch
					0.08 vessel (Note 5), 0.04 Jacket	

Note: Please note that source, special nuclear and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA), are regulated at the U.S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts, that pursuant to the AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

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This bound document contains a total of 2 sheets.

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Rev.	Reason for Revision	By	Checked	Review	Approved	Date





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Materials of Construction

Component	Material	Minimum Thickness / Size	Containment
Top Head	SB-575 N06022	See Drawing	Auxiliary
Shell	SB-575 N06022	See Drawing	Primary
Bottom Head	SB-575 N06022	See Drawing	Primary
Support	SA-240 304 (Note 1 & 6) ¹	See Drawing	NIA
Jacket/Coils/Half-Pipe Jacket	SA-312 304 (Note 1)	See Drawing	NIA
Internals	SB-575 N06022 / SB-622 N06022 (Note 7) ¹	See Drawing	Thermowells Primary
Pipe (Seamless)	SB-622 N06022 & SB-622 N06276 (For 1 1/2" & 2" Pipe) / SA-312 TP304	See Drawing	Note 2
Forgings/ Bar stock	SB-564 N06022 / SA182 F304	See Drawing	NIA
Gaskets (O Ring)	EPDM	NIA	NIA
Bolting	SA-193 Gr. B8M / SA-194 Gr. 8M	NIA	NIA

Miscellaneous Data

Orientation	Vertical	Support Type	Skirt
Insulation Function	Not Applicable	Insulation Material	Not Applicable
Insulation Thickness (inch)	Not Applicable	Internal Finish	Descaled as laid
		External Finish	Note 3

Remarks

* To be determined by the vendor.

Note 1: Material shall have Carbon Content of 0.030% Max. Non-welded specialty items are excluded from this requirement.

Note 2: Nozzle necks below normal operating level are Primary, others Auxiliary. See PVDF and vessel drawing for NDT.

Note 3: Shell welds under half pipe coils to be ground smooth. Others descaled as laid.

Note 4: Contents of this document are Dangerous Waste Permit affecting.

Note 5: Corrosion allowance of 0.01" is also to be added to the external surface of shell under the jacket. ¹

Note 6: Use SA-240 316 material for skirt and base chair gussets as design change by SDDR No. 24590-WTP-SDDR-PROC-04-00936. ¹

Note 7: Use Hastelloy C-276 in lieu of Hastelloy C-22 material for removable eductor guide cone as reference by SDDR No. 24590-WTP-SDDR-PROC-04-01080. ¹

Equipment Cyclical Data Sheet

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