

FORM U-DR-1 USER'S DESIGN REQUIREMENTS FOR SINGLE-CHAMBER PRESSURE VESSELS

Owner:		Operator:		Country of Installation:		State/Province of Installation:		City of Installation:									
Service:			Liquid Level: _____ Specific Gravity: _____			Item No.:											
Diameter:			Length, Tangent-to-Tangent:			Type: Vertical <input type="checkbox"/> Horizontal <input type="checkbox"/> Sphere <input type="checkbox"/>											
National Board Registration Required: Yes <input type="checkbox"/> No <input type="checkbox"/>		Canadian Registration Required: Yes <input type="checkbox"/> No <input type="checkbox"/>		Special Service: Lethal (L) <input type="checkbox"/> Direct Firing (DF) <input type="checkbox"/> Unfired Steam Boiler (UB) <input type="checkbox"/>			Overpressure Protection: Valve <input type="checkbox"/> Rupture Disk <input type="checkbox"/> Other <input type="checkbox"/> System Design <input type="checkbox"/>										
OPERATING CONDITIONS:			Minimum Pressure		Maximum Pressure		Minimum Temperature		Maximum Temperature								
Case 1																	
Case 2																	
DESIGN CONDITIONS:			Pressure				Temperature										
Internal Design Pressure:																	
External Design Pressure:																	
MAWP Internal:			Same as Design Pressure <input type="checkbox"/>			Calculated by Manufacturer: <input type="checkbox"/>											
MAWP External:			Same as Design Pressure <input type="checkbox"/>			Calculated by Manufacturer: <input type="checkbox"/>											
Minimum Design Metal Temperature (MDMT) – Case 1			Deg @				Due to: Process <input type="checkbox"/> Other <input type="checkbox"/> Ambient Temperature <input type="checkbox"/>										
Minimum Design Metal Temperature (MDMT) – Case 2			Deg @				Due to: Process <input type="checkbox"/> Other <input type="checkbox"/> Ambient Temperature <input type="checkbox"/>										
Corrosion Allowance:		Shell		Heads		Nozzles		Jacket		Coil		Supports		Internals		Corrosive Service?	
		Int. Ext.		Int. Ext.		Int. Ext.		Int. Ext.		Int. Ext.		Int. Ext.				Yes No <input type="checkbox"/> <input type="checkbox"/>	
Cyclic Service: Yes <input type="checkbox"/> No <input type="checkbox"/>		_____ Cycles per _____				Design Life _____ years		Fatigue Analysis? Yes <input type="checkbox"/> No <input type="checkbox"/>									
Wind Loading: ASCE 7 <input type="checkbox"/>		Wind Speed		Classification Category		Exposure Category		Topographic Factor		Elevation		UBC <input type="checkbox"/> IBC <input type="checkbox"/>		Other <input type="checkbox"/> None <input type="checkbox"/>			
Seismic Loading: ASCE 7 <input type="checkbox"/>		Soil Profile Classification:		PWHT: Per Code <input type="checkbox"/>		Process Required <input type="checkbox"/>		Other Loadings per UG-22: Temp. Gradients <input type="checkbox"/> Deflagration <input type="checkbox"/> Diff. Thermal Exp. <input type="checkbox"/>									
Insulated: Yes <input type="checkbox"/> No <input type="checkbox"/>		Type		Thickness		Density		Coating Specification _____									
By Manufacturer <input type="checkbox"/> By Others <input type="checkbox"/>		External _____		Internal _____		_____		Permitted Prior to Pressure Test Yes <input type="checkbox"/> No <input type="checkbox"/>									
Vessel Support: Legs <input type="checkbox"/> Skirt <input type="checkbox"/> Lugs <input type="checkbox"/> Saddles <input type="checkbox"/>						Fireproofing: Yes <input type="checkbox"/> No <input type="checkbox"/>		Type:		Rating (hr):							
MATERIALS																	
Component		Specification				Component		Specification									
Shell						Ellipsoidal Head											
Hemispherical Head						Torispherical Head											
Toriconical Head						Conical Head											
Nozzles						Flanges											
Stiffener Rings						Pressure-Retaining Bolts											
Attachments						Internals											
Reinforcing Pads						Other _____											
NOZZLE SCHEDULE																	
Description		Number Required	Size	Flange Type	Class	Description		Number Required	Size	Flange Type	Class						

FORM U-DR-1 (Back)

WELDED PRESSURE JOINT REQUIREMENTS				
DESIGN BASIS:	SHELL AND CONE THICKNESS BASED ON: JOINT EFFICIENCY $E =$ _____		HEAD THICKNESS BASED ON: JOINT EFFICIENCY $E =$ _____	
JOINT LOCATION UW-3		TYPE OF JOINT (Use Types as Described in UW-12)		NDE WITH COMMENTS
Category A				
Category B	Head-to-Shell			
	Other			
Category C	Body Flanges			
	Nozzle Flanges			
Category D				
BODY FLANGE REQUIREMENTS				
Description	Type	Facing/Surface Finish	Gasket Style	Joint Assembly (See ASME PCC-1)
SKETCH				
GENERAL NOTES				
CERTIFICATION				
We certify that the statements made in this form are accurate and represent all details of design as per the user or his designated agent [see Nonmandatory Appendix NN]				
Date: _____			Registration Seal (Optional)	
User: _____				
Signed: _____ (Representative)				
Registration Identification: _____ (Optional)				