

**TECHNICAL APPENDIX FORM (TA5031) FOR PRESSURE VESSELS  
PRESSURE VESSEL ENGINEERING NOTE PER CHAPTER 5031**

Prepared by: \_\_\_\_\_  
Preparation date: \_\_\_\_\_

1. Description and Identification  
Fill in the label information below:

<b>THIS VESSEL CONFORMS TO FERMILAB ES&amp;H MANUAL CHAPTER 5031</b>	
Vessel Title	_____
Vessel Number	_____
Vessel Drawing No.	_____
Maximum Allowable Working Pressure (MAWP)	
Internal Pressure	_____
External Pressure	_____
Working Temperature Range	_____ °F      _____ °F
Contents	_____
Designer / Manufacturer	_____
Test Pressure (if tested at Fermilab)	Acceptance Date _____
_____ PSIG, Hydraulic _____	Pneumatic _____
Accepted as conforming to standard by	_____
Of Division / Section	Date: _____

← Obtain from Division/Section Safety Officer

← Document per Chapter 5034 of the Fermilab ES&H Manual

← Actual signature required

NOTE: Any subsequent changes in contents, pressures, temperatures, valving, etc., which affect the safety of this vessel shall require another review.

Reviewed by: \_\_\_\_\_  
(Print Name)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Director's signature (or designee) if the vessel is for manned areas but doesn't conform to the requirements of the chapter.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Amendment No.: \_\_\_\_\_ Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 Lab Property Number(s) : \_\_\_\_\_  
 Lab Location Code: \_\_\_\_\_ (obtain from safety officer)  
 Purpose of Vessel(s) : \_\_\_\_\_  
 \_\_\_\_\_  
 Vessel Capacity/Size: \_\_\_\_\_ Diameter: \_\_\_\_\_ Length: \_\_\_\_\_  
 Normal Operating Pressure (OP) \_\_\_\_\_  
 MAWP-OP = \_\_\_\_\_ PSI

List the numbers of all pertinent drawings and the location of the originals.

<u>Drawing #</u>	<u>Location of Original</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

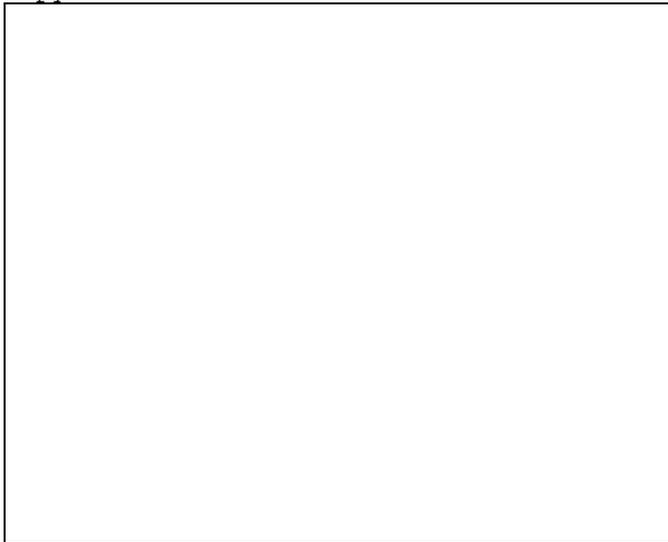
2. Design Verification

Is this vessel designed and built to meet the ASME BPVC or "Experiment Vessel" requirements?  
 Yes \_\_\_ No \_\_\_.

If "No" state the standard that was used \_\_\_\_\_.  
 Demonstrate that design calculations of that standard have been made and that other requirements of that standard have been satisfied.  
 Skip to part 3 "system venting verification."

Does the vessel(s) have a U stamp? Yes \_\_\_ No \_\_\_\_\_. If "Yes", complete section 2A; if "No", complete section 2B.

A. Staple photo of U stamp plate below.  
 Copy "U" label details to the side



Copy data here:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Provide ASME design calculations in an appendix. On the sketch below, circle all applicable sections of the ASME code per Section VIII, Division I. (Only for non-coded vessels)

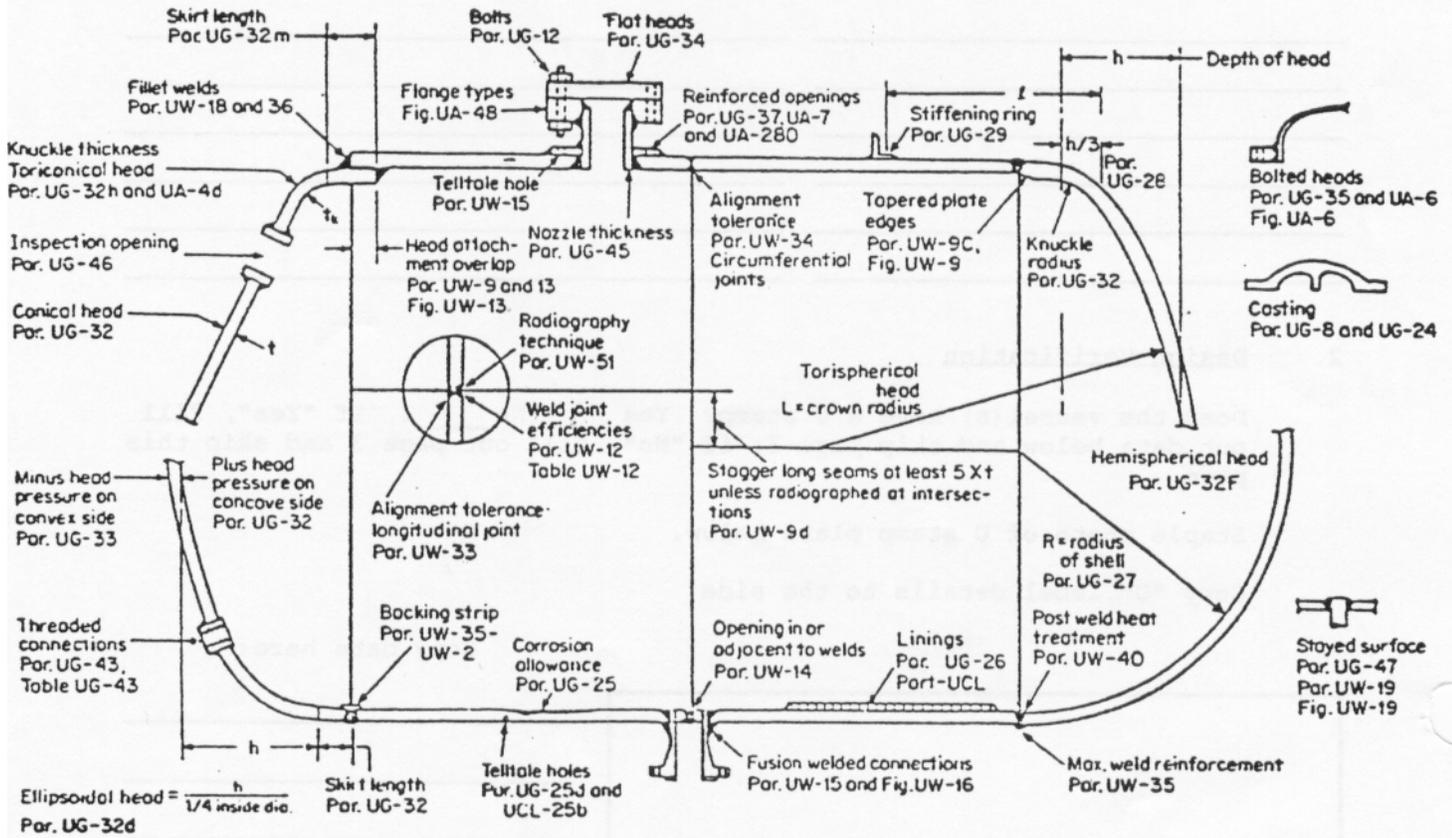


Figure 1. ASME Code: Applicable Sections

2B.

Summary of ASME Code

Item	Reference ASME Code Section	CALCULATION RESULT (Required thickness or stress level vs. actual thickness calculated stress level)
_____	_____	VS _____

3. System Venting Verification Provide the vent system schematic.

Does the venting system follow the Code UG-125 through UG-137?  
Yes\_\_\_ No\_\_\_

Does the venting system also follow the Compressed Gas Association Standards S-1.1 and S-1.3?  
Yes \_\_\_\_\_ No \_\_\_\_\_

A "no" response to both of the two preceding questions requires a justification and statement regarding what standards were applied to verify system venting is adequate.

List of reliefs and settings:

Manufacturer	Model #	Set Pressure	Flow Rate	Size

4. Operating Procedure

Is an operating procedure necessary for the safe operation of this vessel?  
Yes\_\_\_\_\_ No\_\_\_\_\_ (If "Yes", it must be appended)

5. Welding Information

Has the vessel been fabricated in a non-code shop? Yes\_\_\_\_\_ No\_\_\_\_\_ If "Yes", append a copy of the welding shop statement of welder qualification (Procedure Qualification Record, PQR) which references the Welding Procedure Specification (WPS) used to weld this vessel.

6. Existing and Unmanned Area Vessels

Is this vessel or any part thereof in the above categories?  
Yes\_\_\_\_\_ No\_\_\_\_\_

If "Yes", follow the requirements for an Extended Engineering Note for Existing and Unmanned Area Vessels.

7. Exceptional Vessels

Is this vessel or any part thereof in the above category?  
Yes\_\_\_\_\_ No\_\_\_\_\_

If "Yes", follow the requirements for an Extended Engineering Note for Exceptional Vessels.

**THIS VESSEL CONFORMS TO FERMILAB ES&H MANUAL  
CHAPTER 5031**

Vessel Title \_\_\_\_\_

Vessel Number \_\_\_\_\_

Vessel Drawing No. \_\_\_\_\_

Maximum Allowable Working Pressure (MAWP)

Internal Pressure \_\_\_\_\_

External Pressure \_\_\_\_\_

Working Temperature Range \_\_\_\_\_ °F \_\_\_\_\_ °F

Contents \_\_\_\_\_

Designer / Manufacturer \_\_\_\_\_

Test Pressure (if tested at Fermilab) \_\_\_\_\_ Acceptance Date \_\_\_\_\_

\_\_\_\_\_ PSIG, Hydraulic \_\_\_\_\_ Pneumatic \_\_\_\_\_

Accepted as conforming to standard by \_\_\_\_\_

\_\_\_\_\_

Of Division / Section \_\_\_\_\_

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Figure 2. Sample of sticker to be completed and placed on vessel.