

Index of COUPP-2L Engineering Documentation:

- 1) COUPP-2L Process Diagram:
 - a. This is a work in progress. What is posted is a hand-written first draft of the revised process diagram, plus the original (also hand-written) analysis prepared by Russ Rucinski on the occasion of the 2007 review of the hydraulic cart.
 - b. <http://coupp-docdb.fnal.gov:8080/cgi-bin/ShowDocument?docid=56>

- 2) The PPD/Technical Centers Department Hydraulic Cart:
 - a. *PPD/TC operates somewhat differently from PPD/MD in that work from PPD/TC is not documented in the “Engineering Notes” system maintained by PPD/MD. The cart mechanical design was done by Carl Lindenmeyer. Carl’s work is largely hand drawn and documented in a physical notebook maintained by PPD/TC. The instrumentation and controls work on the cart was done by Jerry Zimmerman, and is documented separately.*
 - b. *The original Hydraulic Cart Mechanical documentation from Carl Lindenmeyer has been scanned:*
 - c. [COUPP-doc-54-v1: COUPP 2L Hydraulic Cart Mechanical Documentation](#)
 - d. The air tank on the COUPP-2L hydraulic cart meets the definition of a pressure vessel. It bears a “silver sticker” PPD10103 and is the subject of a pressure vessel note prepared by Carl Lindenmeyer, 10/11/06:
 - e. http://www-esh.fnal.gov:8001/PV_Eng_Notes/PPD10103.pdf
 - f. Hydraulic Cart Controls Document from Jerry Zimmerman:
 - g. [COUPP-doc-55-v1: COUPP 2L Hydraulic Cart Controls](#)

- 3) For Reference: FESHM 5031, Rev. 06/2009 “PRESSURE VESSELS”
 - a. <http://esh-docdb.fnal.gov/cgi-bin/RetrieveFile?docid=456&version=3&filename=5031.pdf>

- 4) The COUPP-2L Pressure Vessel:
 - a. *This document is Andrew Szymulanski’s original 28 September, 2004 Pressure Vessel Note for the Meyer Tool Pressure Vessel. Andrew includes appendices covering all elements of the experiment as it was originally configured.*
 - b. *Note this is a 21 MB file.*
 - c. http://www-esh.fnal.gov:8001/PV_Eng_Notes/PPD10096.pdf
 - d. *Summary of the Appendices:*
 - i. *Appendix 1: “Filling and Operating the 1 Liter Bubble Chamber”*
 1. *Appendix 1 is obsolete. Refer to COUPP-2L Operational Procedures for current information.*
 - ii. *Appendix 2: “Meyer Tool and Mfg., Inc. Certificate of Compliance”*

1. *Note the start of Appendix 2 is not flagged in the scanned copy. Beginning with the formal certificate, this appendix continues with 21 pages of supporting drawings and calculations.*
 - iii. *Appendix 3: consists of the Meyer Tool drawing set for the pressure vessel. The drawings appear in the scanned copy only as an image of the title block of the folded drawings.*
 - iv. *Appendix 4: consists of the “FORM U-1A Manufacturer’s Data Report for Pressure Vessels”*
 - v. *Appendix 5: “Determine the Relief Requirements for Vessel Exposure to Open Fires.”*
 - vi. *Appendix 6: “Heat Exchanger Coils.”*
 - vii. *Appendix 7: “Observation Port Window Technical Information.”*
 - viii. *Appendix 8: is obsolete. This consists of drawings for the first generation polyethylene shielding pile.*
 - ix. *The last element in the scanned document is a Revision Note: “1 liter Bubble Chamber-Outer Vessel COUPP Revision to Engineering Note,” 7/2/07, Kurt Krempez. This note describes revisions to the pressure relief devices on the vessel. **This note is obsolete. A new note is required to document the current pressure relief on the vessel.***
- 5) Pressure Vessel Note Revision. 2010 COUPP-2L Vessel Pressure Relief.
- a. *To Be Written...*
- 6) Pressure Vessel Top Flange Spacer:
- a. *Modification to the pressure vessel 6” diameter top flange assembly to accommodate the increased length of the upgraded 2-liter inner vessel assembly relative to the original 1-liter inner vessel assembly.*
 - b. *The Note interprets the flange as an element of the piping components and not as a vessel or a modification to the vessel. Hence this is an Engineering Note rather than a Pressure Vessel Note.*
 - c. *The reference: PPD Document 656-v1, “MD-ENG-186 Coupp 1 Liter Chamber Spacer Flange,” 28 May 2009, Dave Pushka.*
 - d. <http://ppd-docdb.fnal.gov/cgi-bin/ShowDocument?docid=656>