

# LArFCS Cryogenic System progress

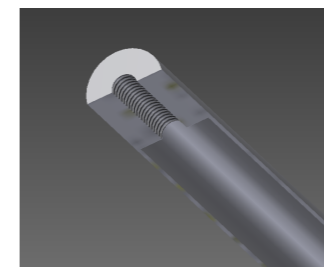
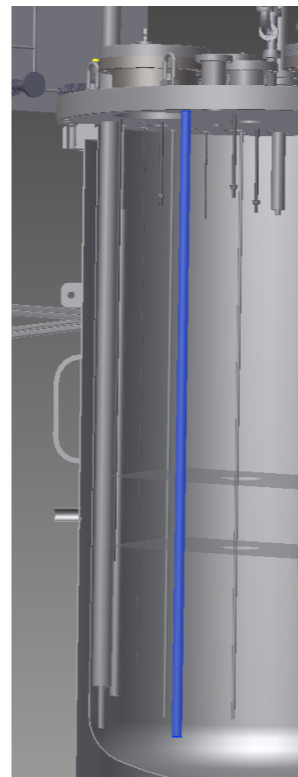
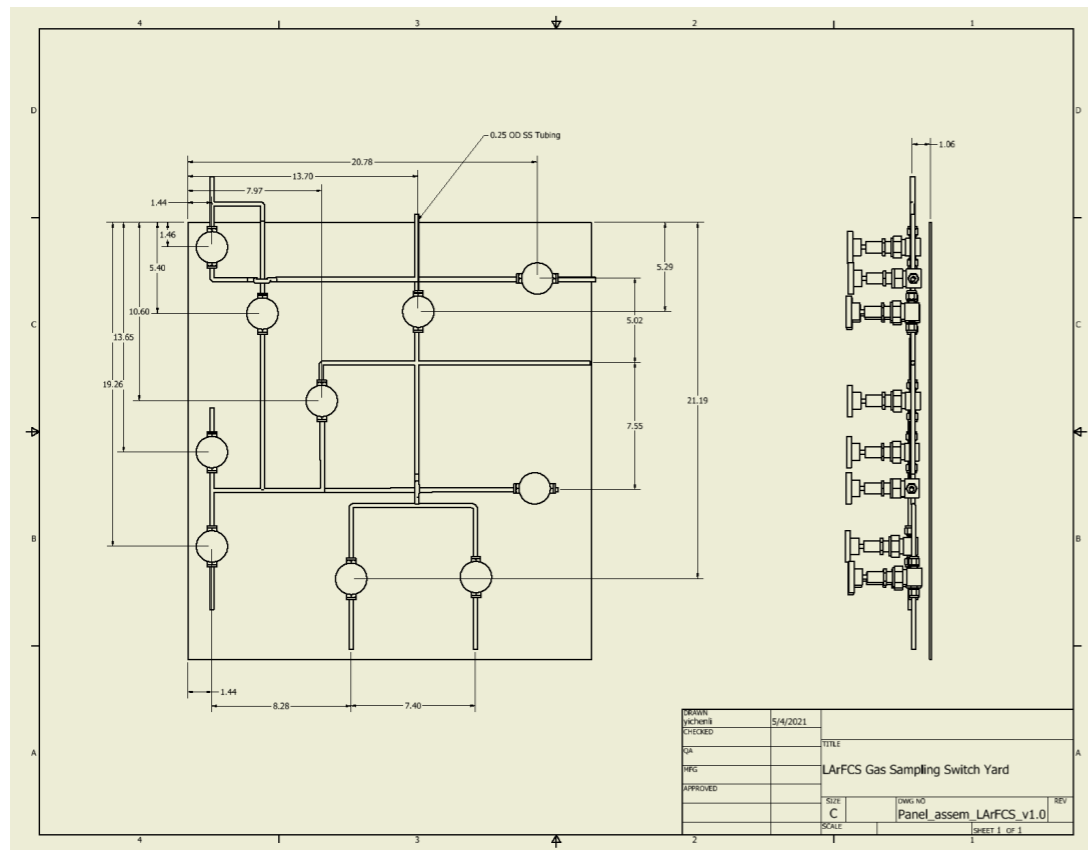
Yichen, Sergey

5/18/21

# LArFCS Cryogenic Construction

## ► LArFCS Cryogenic Construction

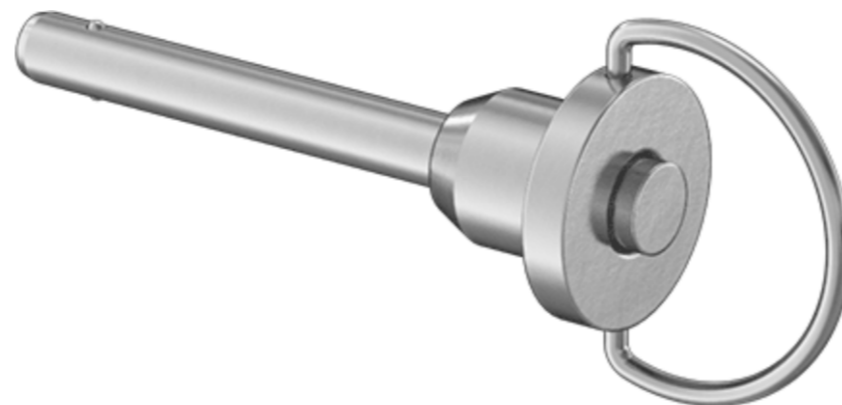
- Met with Key High Vacuum about the production of the parts for next operation
  - Quote received for the gas switch panel and support rod with threaded adapter
  - Gas panel with weldment: \$11,250, material cost ~\$2200, lead time 4-6 weeks
  - Mount rod: \$150 each, total \$600 for 4 pcs, 2 weeks
  - Waiting for the quote for the modified top flange
  - Pin-hole found on the heater weld joint, cutting it off to check the wires
  - It seems too expensive to build the switch panel with KHV, talked to our tech., we can DIY it

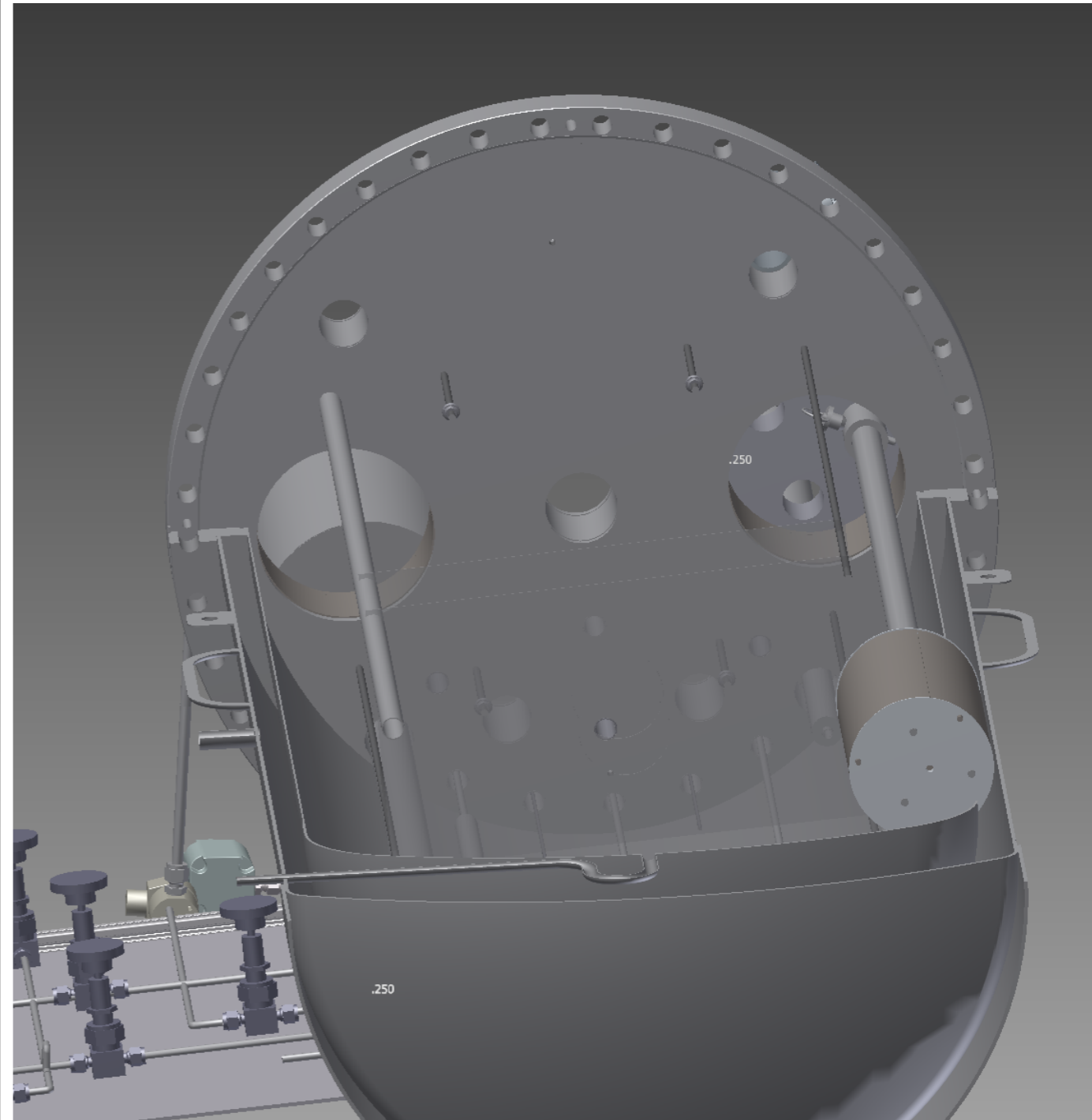
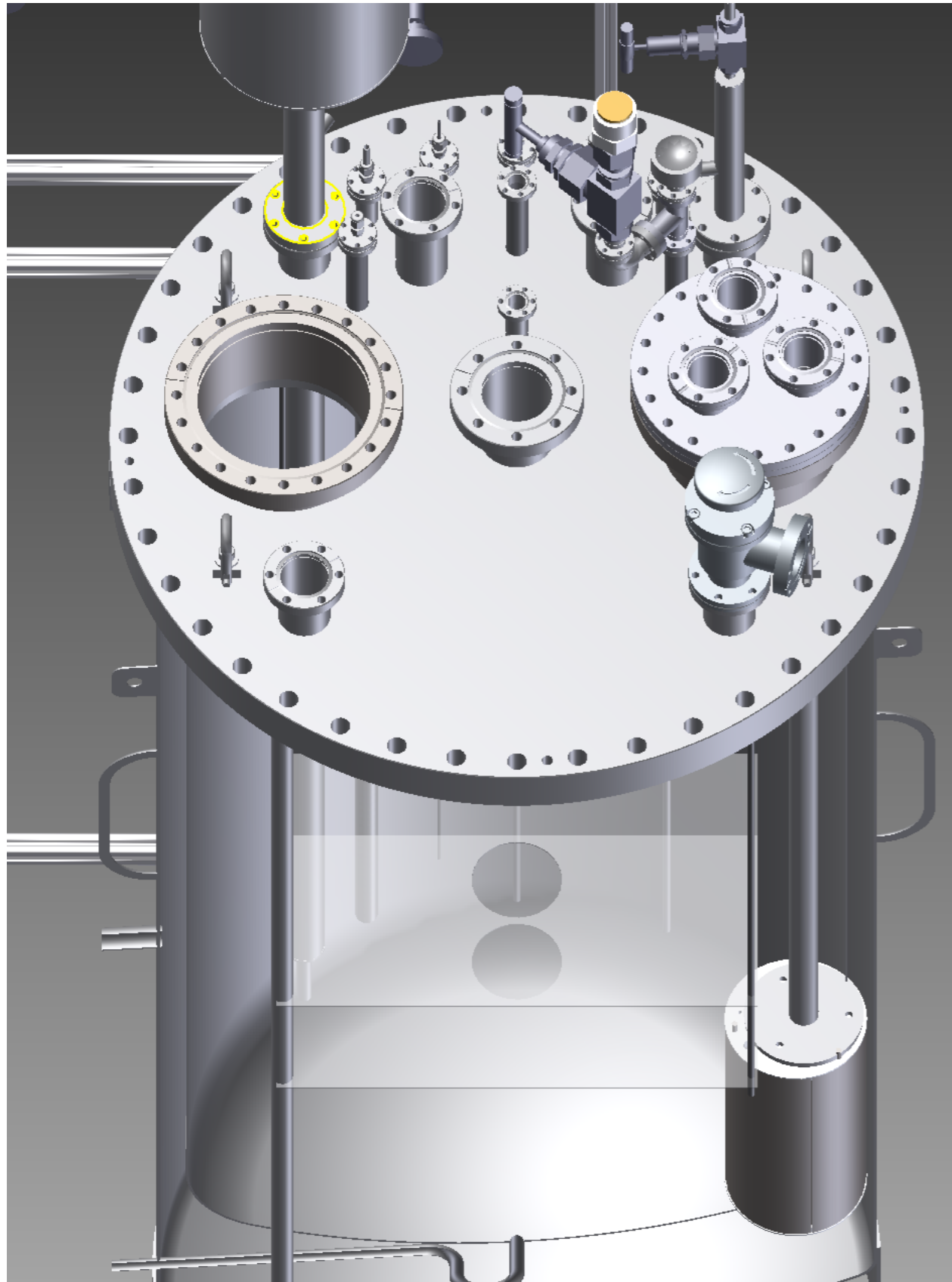


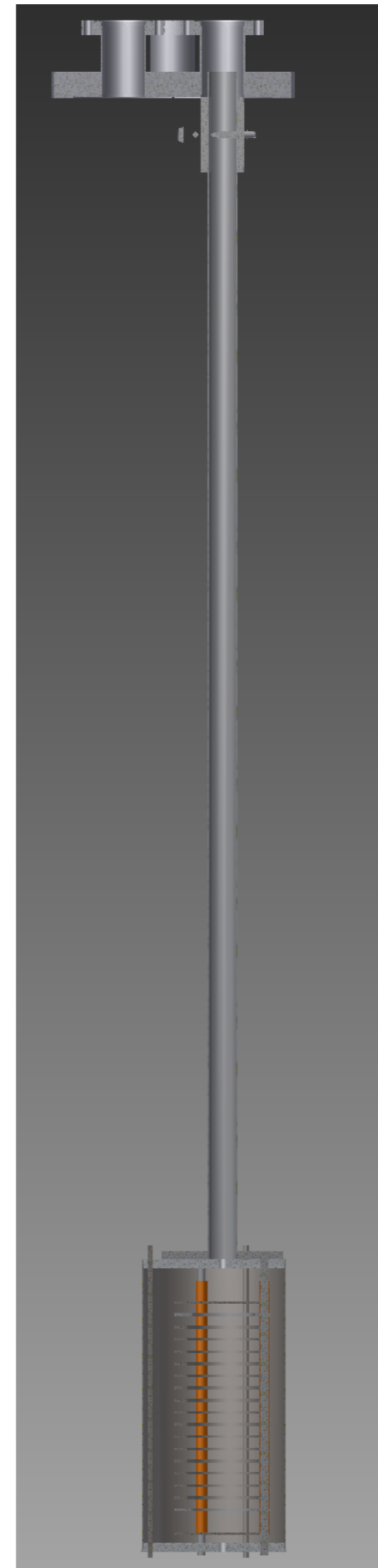
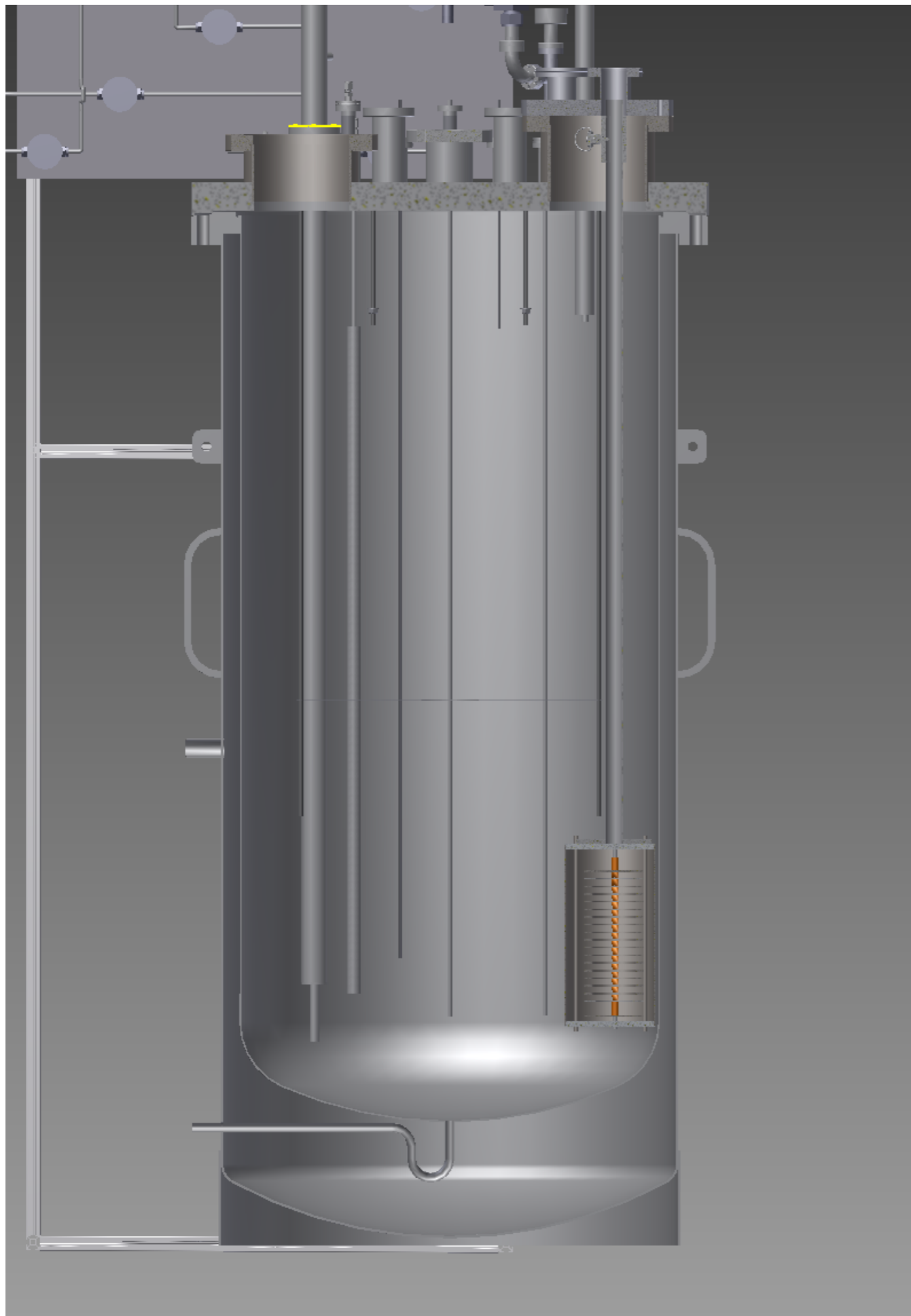
# LArFCS Cryogenic Construction

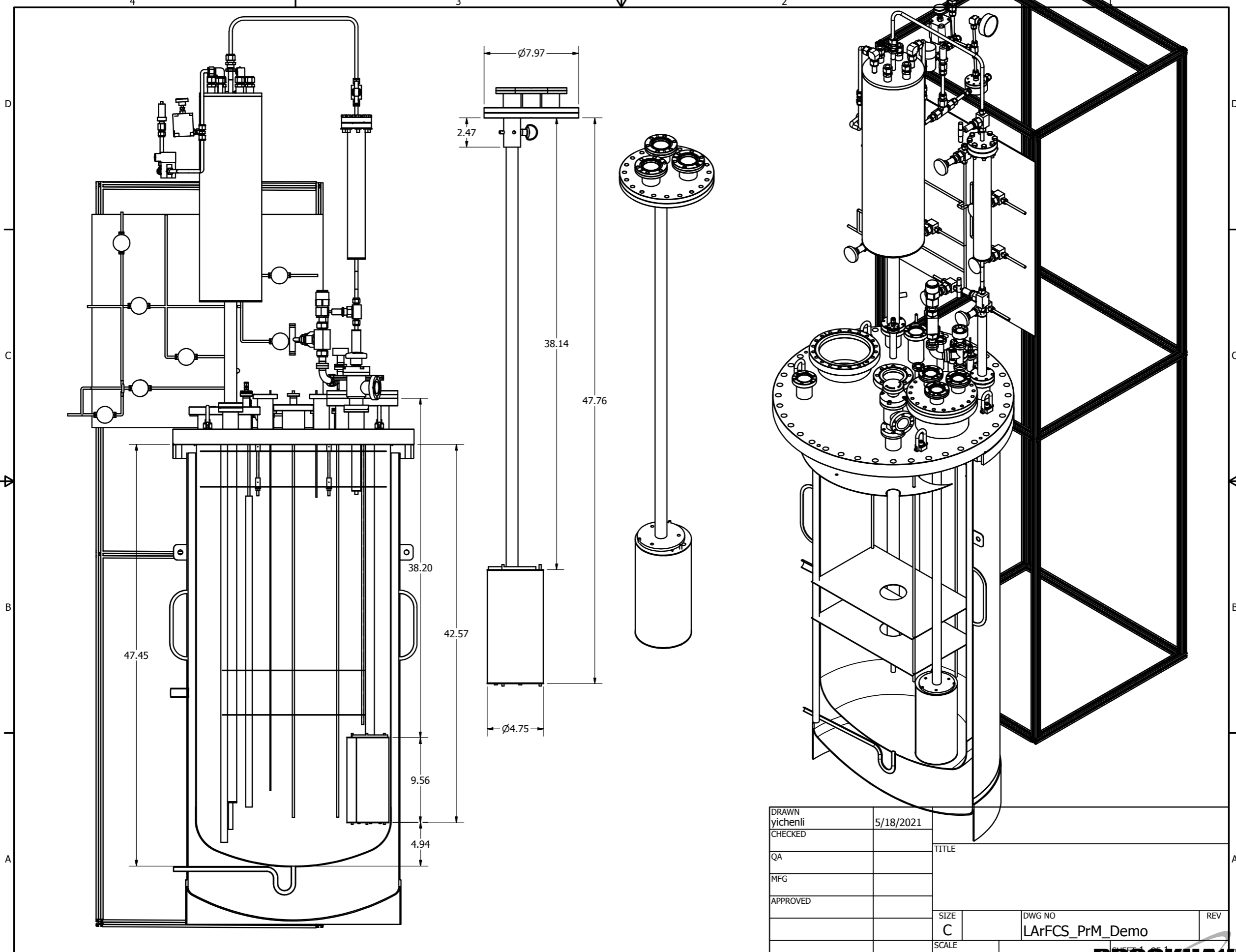
## ► PrM mounting Solutions

- The PrM stack can be connected with a 1" OD tube to the top 8" flange
- An adapter welded to the flange
- The tube can be secured to the adapter with a Pin
- The PrM connect to the tube with a bracket
- 8" conflat flange opening is 5.75", sufficient to drop down the assembly with 4.75" OD
- Drawing sent to KHV for quote
- See next slides for details









DRAWN	yichenli	5/18/2021	TITLE	
CHECKED			TITLE	
QA			TITLE	
MFG			TITLE	
APPROVED			TITLE	
			SIZE	DWG NO
			C	LArFCS_PrM_Demo
			SCALE	REV

# LArFCS Purity Monitor

## ▸ PrM Implementation in LArFCS system

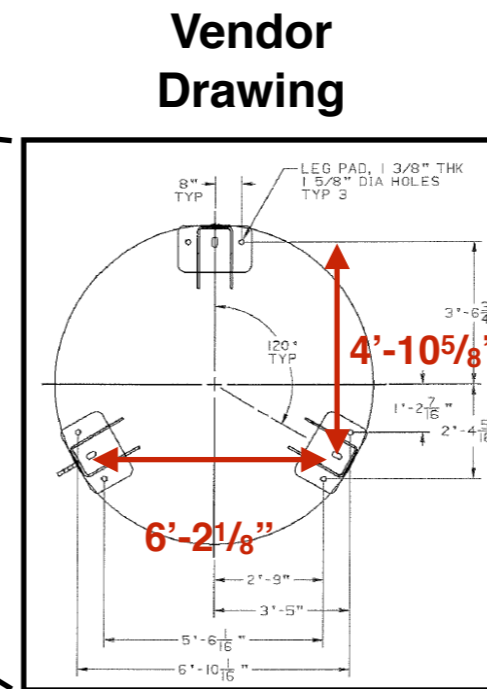
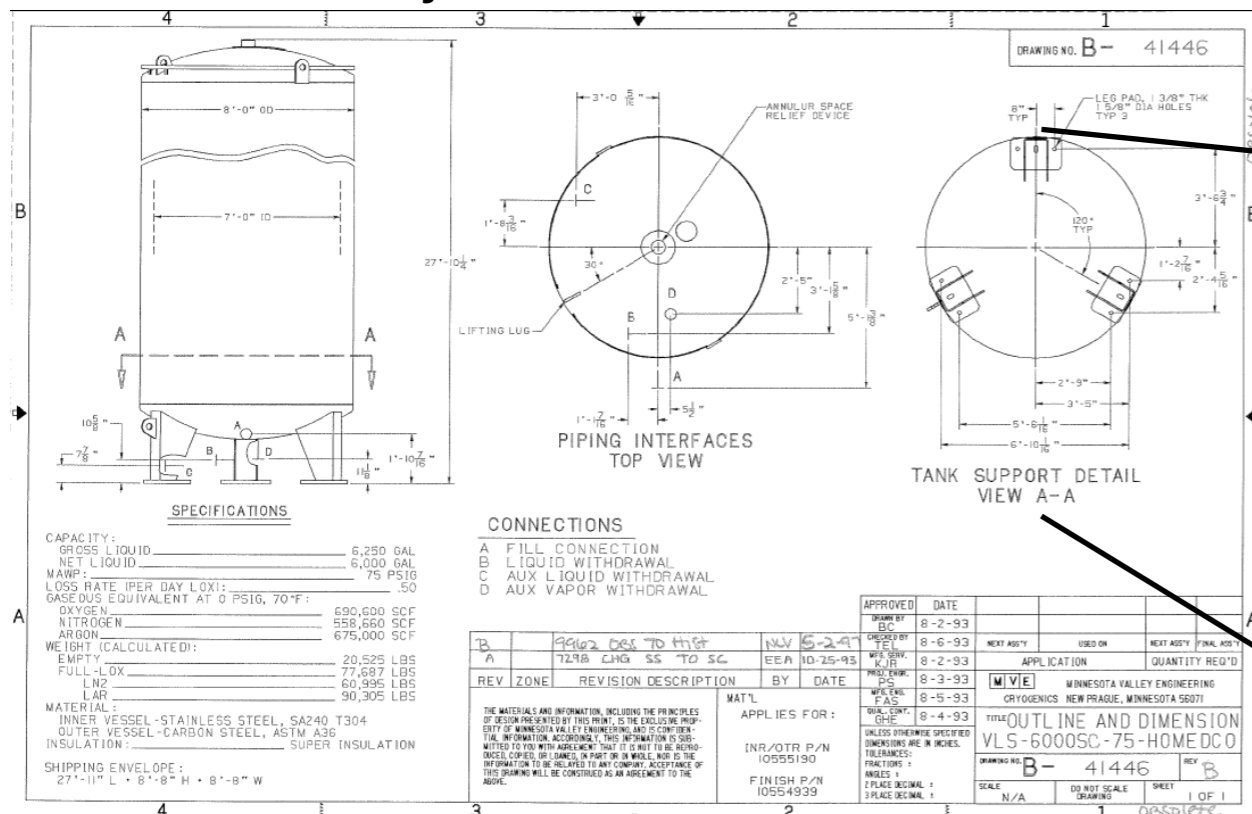
- Items inspected at UCI
- Sufficient to build the electronics box with the inventory times they have
- A student has started soldering things together
- It take about 2 months to build the last unit, shooting for 1 month this time
- I will send the HV flange with refilling parts in the next shipment



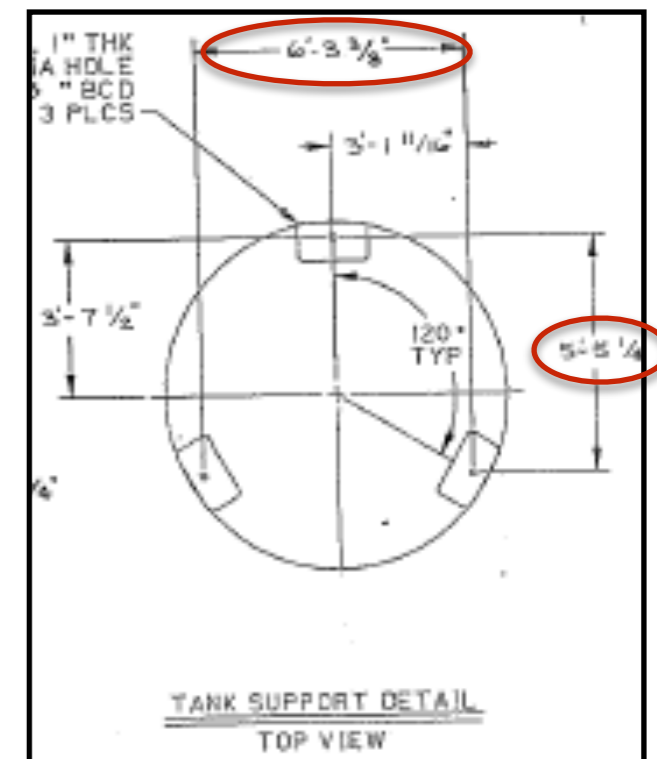
# 6000 Gallon LN2 tank

## ► Discussion with Safety to use the tank

- A meeting scheduled with Mike Gaffney 3pm tomorrow at HighBay near the tank
- Building Manager Tom Doyle will join
- Welcome to join the discussion
- Essential Documents received from the manufacturer(BNLIF docdb #331)
  - A late finding of the reason of miss-matched mount rod locations on the pad
- Talked to Bill McKeon from Magnet Division about the procedures of check the functionality of the tank



## FO Drawing



# 6000 Gallon LN2 tank

## ► Preliminary tank inspection

- Inspection following suggestions from Bill
- The essential portal is the vacuum probe
- DV4 or DV6 thermocouple vacuum gauge
- Bill is sending a technician to get a reading, waiting to hear back the number
- The press relief devices contain swappable pairs: Burst Disk/Relief valve can be changed without break the vacuum

