

2020-04-29 Discussion on modification

29 April 2020 15:11

Agenda

<https://indico.uu.se/event/752/>

NOTE: added photos of top flange, picture with dimensions, flow diagram

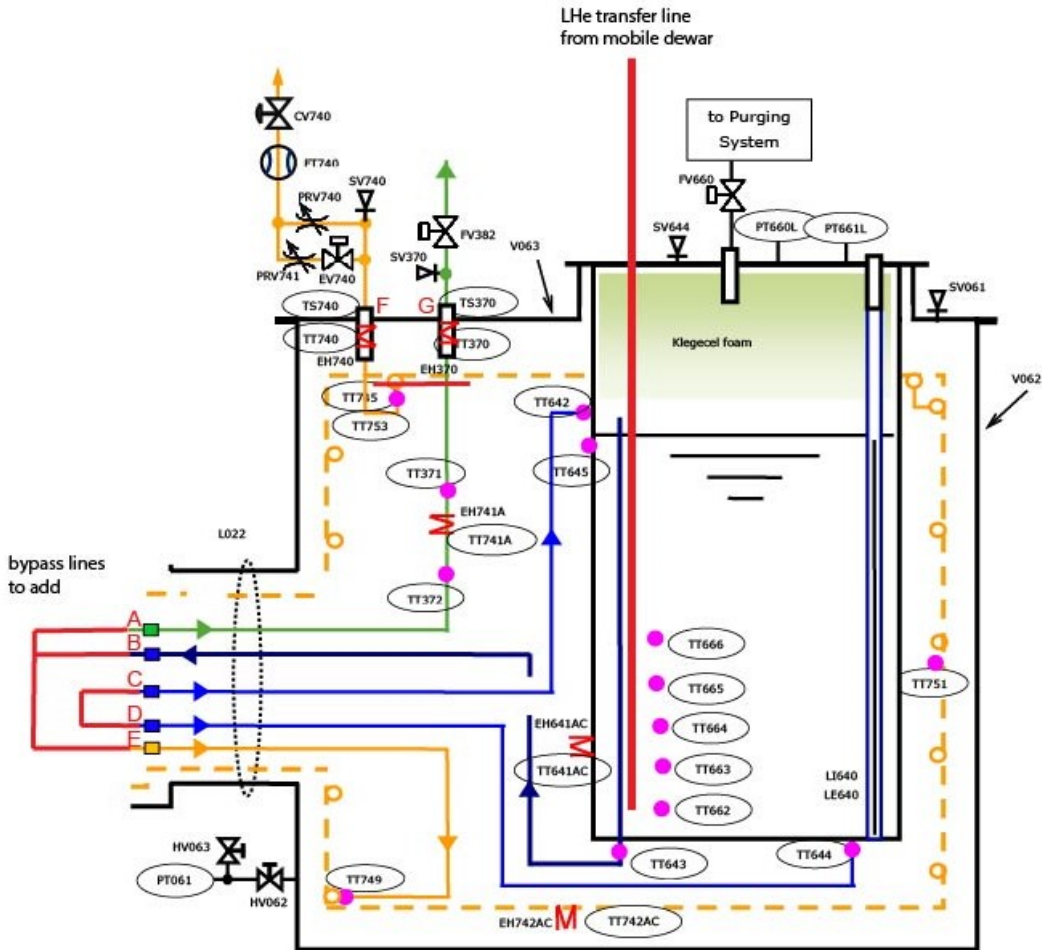
Present

Johan, Lars, Rocio, Roger

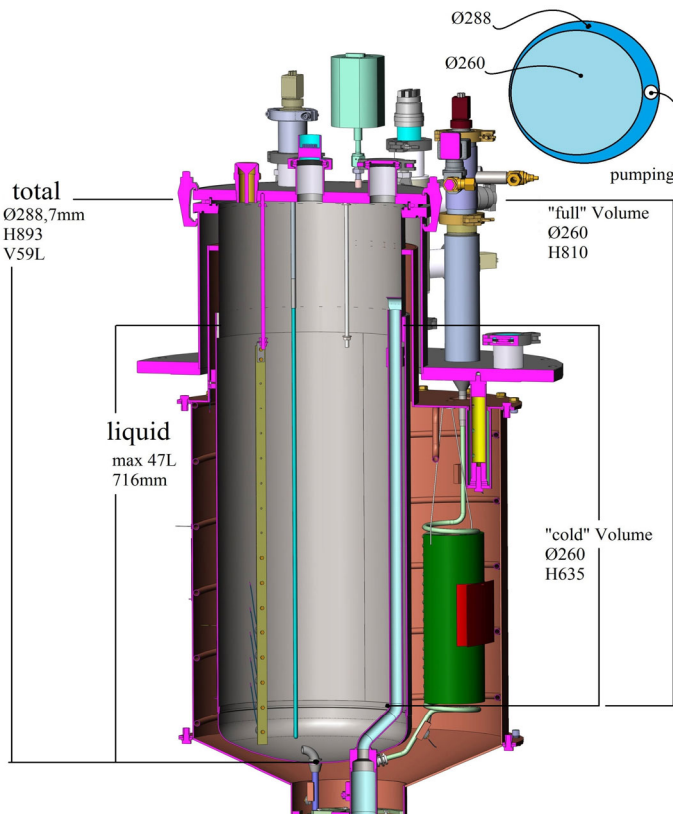
Minutes

- sensors
 - level sensors is available, but no controller box
 - temperature sensors to be checked
 - might be internal on the screen etc
 - 5 sensors inside are re-used
 - have spare 1 Cernox, 2x CGR
 - need a monitor system
 - base on existing simple hardware from Volker and Konrad
 - need feedthrough
 - SMA, BNC, other? how many?
 - to discuss with Richard, Dragos etc.
 - plus some spare for future experiments
 - companies:
 - VaqTec: <http://www.vaqtec.com>
 - MDC: <https://www.mdcvacuum.com>
 - Jaeger: www.jaegerconnecteurs.com
 - Fisher: www.fischerconnectors.com
- operation
 - 4K atmospheric
 - 2K operation is not possible as it requires more resources
 - connection of liquid helium transfer-line (from mobile dewar) on the top
 - this is easier than connecting on the side
 - need heaters to warm-up cold gas helium
any of the following solutions
 - connect to ambient-air heater next to liquefier
 - use the spare heater we have for the liquid nitrogen exhaust
 - (F) (G) install heaters in the cryostat outlet (EH740, EH370)
 - install bypass lines at the end of the Valve Box connection line
 - (B) 2K pumping line (dark blue) connects to
 - (F) liquid nitrogen inlet cooling shield (orange)
 - (A) supercritical helium line (green), used as bypass to regulate the flow through the thermal shield
 - (C) (D) cool down and filling lines (light blue)
 - bypass to inter-connect the two lines
 - test if cryostat works like this
 - then we don't have to remove the bend
 - install (manual) valves at outlet (F) and (G) to regulate the cooling flow through the thermal screen

Overview μ Gersemi Flow Diagram



Overview μ Gersemi Dimensions



To Do

- Lars
 - check connection feedthrough on top flange (photos)
 - check which valves etc. are still mounted
- Rocio
 - check which sensors are still mounted
 - check if any heater cartridges are available
 - check heater fins, companies? (Jean-Pierre?)
- Johan
 - check available transfer line: diameter and height
 - ~~check if flexible lines in bottom bend connection to valve box (do not need to check)~~
- Roger
 - check possibility for monitoring system