

INTRODUCTION TO HELIUM REFRIGERATION FOR SUPERCONDUCTING DEVICES

CONNECTION BETWEEN COLD BOX AND OBJECTS TO BE COOLED

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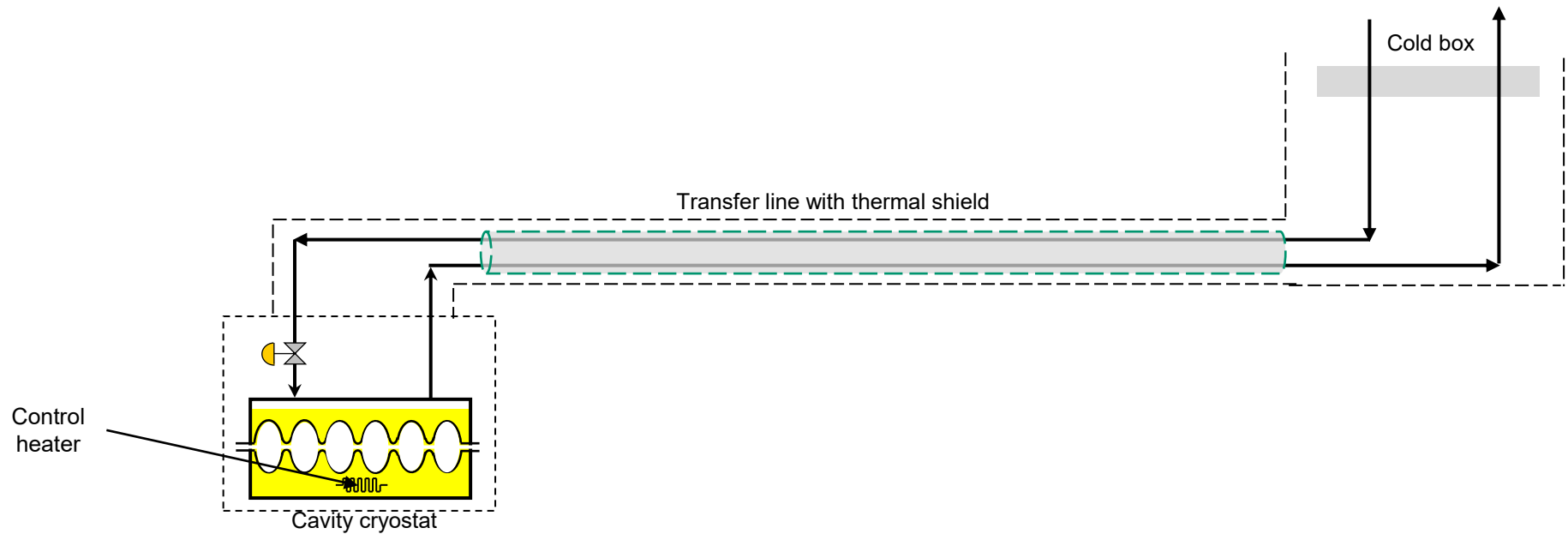
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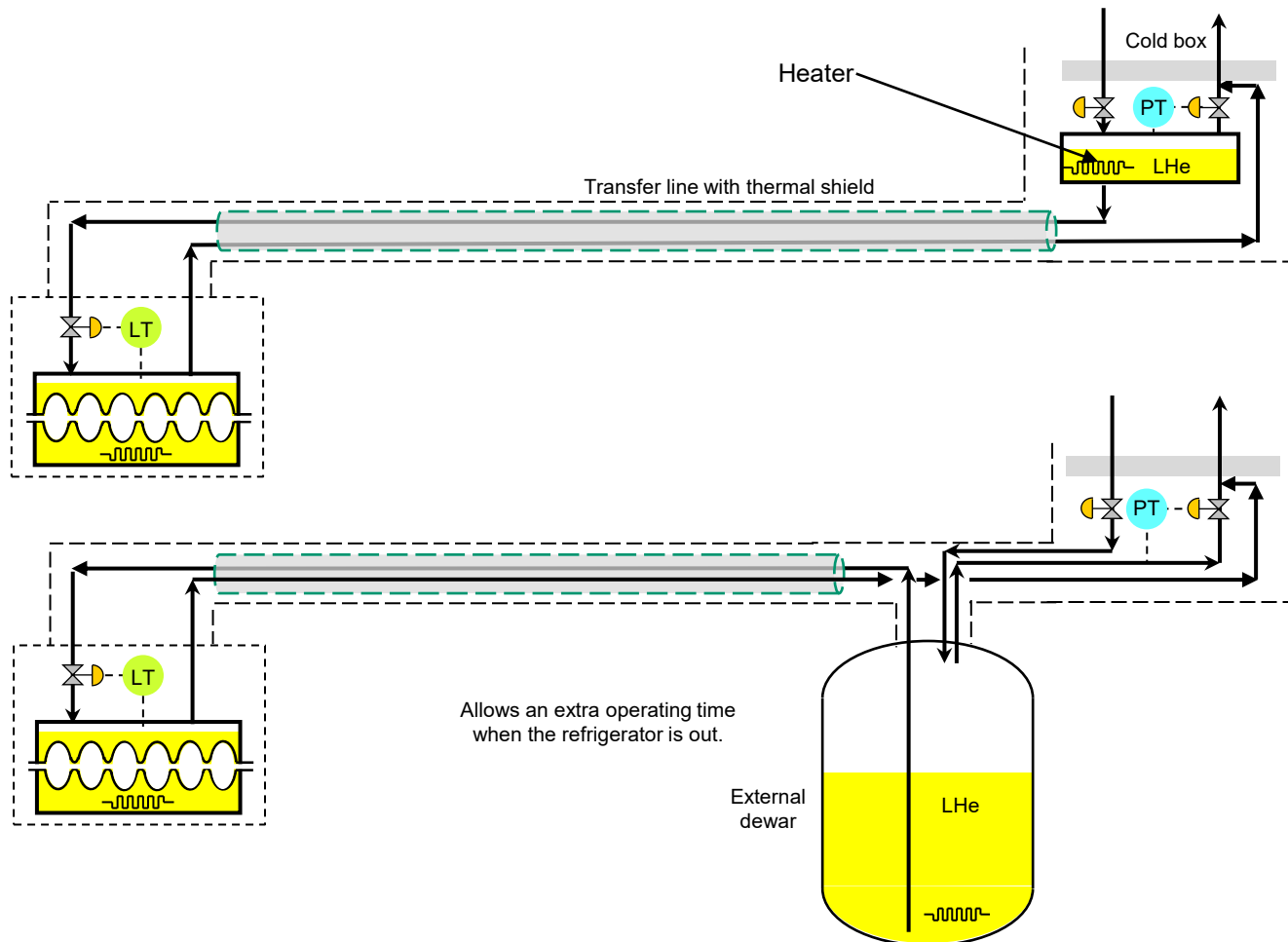


OPERATION at $T > 4.50$ K

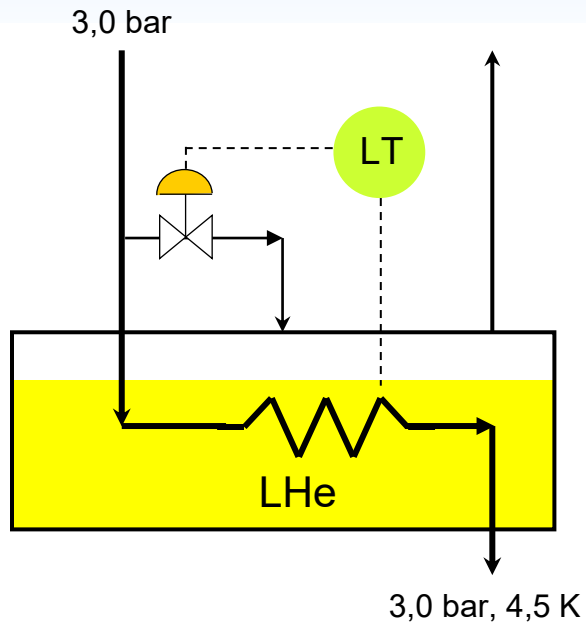
LIQUID BATH, FED BY DIRECT CONNECTION



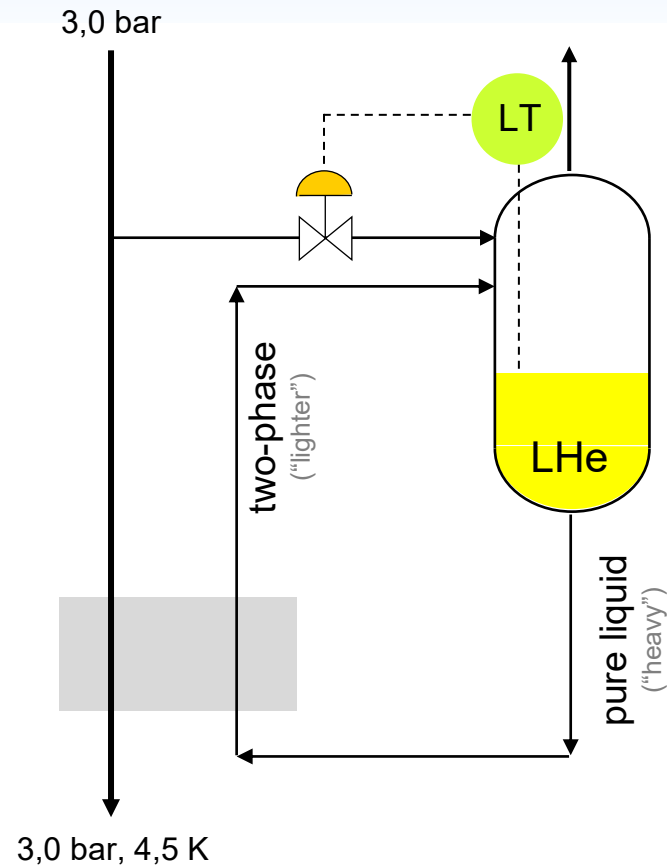
LIQUID BATH, FED BY LIQUID



THERMAL SYPHON

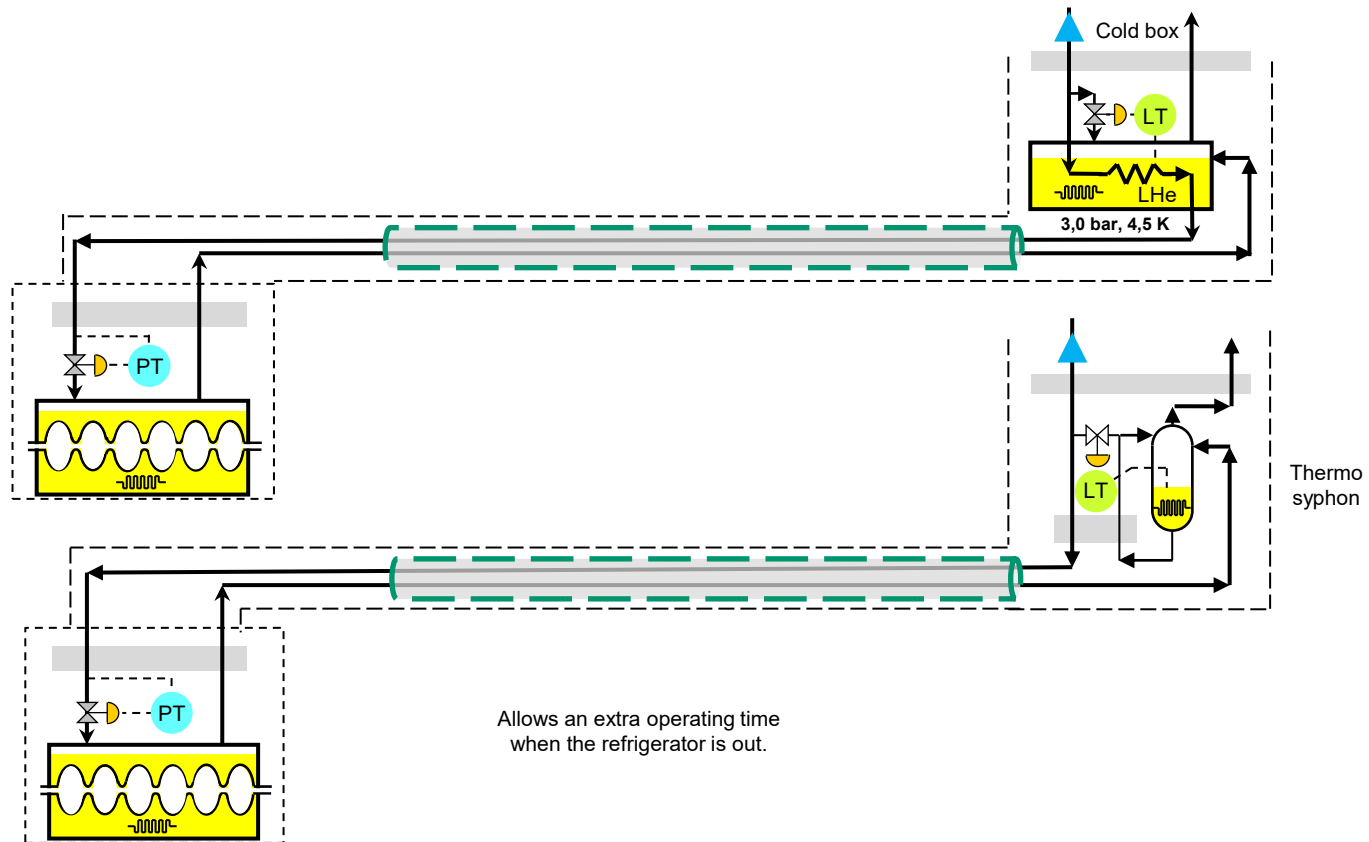


Sub cooler

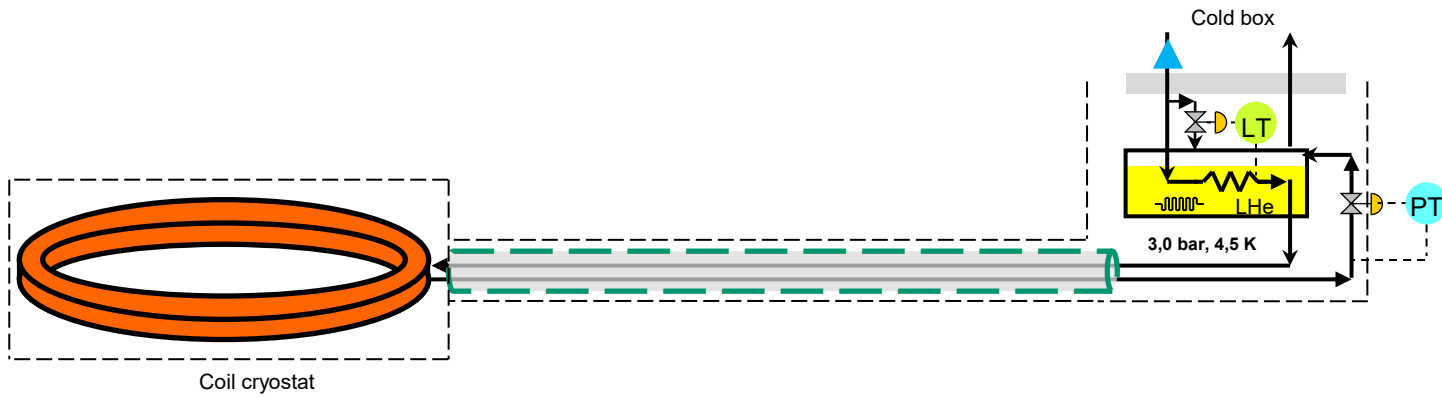


Thermal syphon

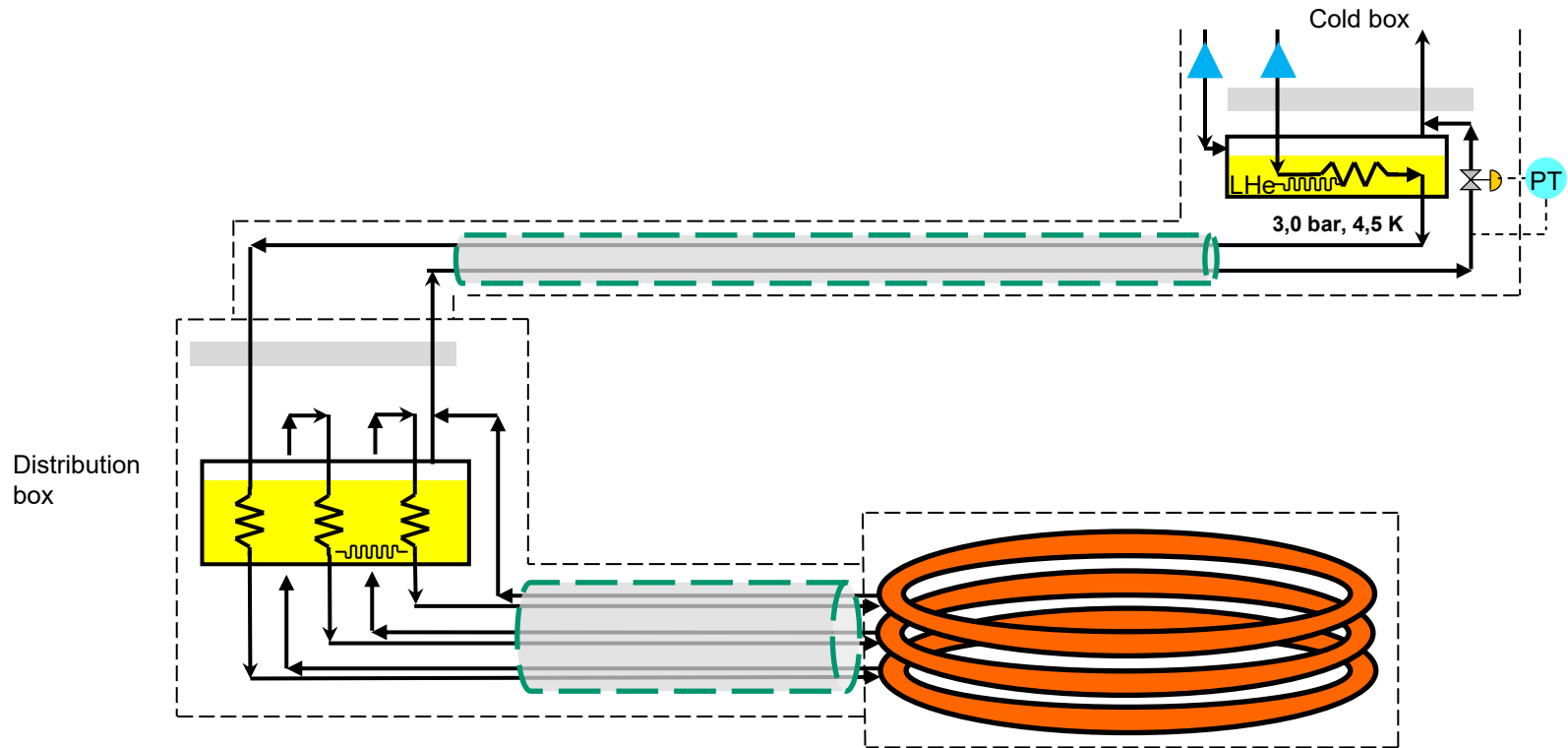
LIQUID BATH FED FROM SUPERCRITICAL



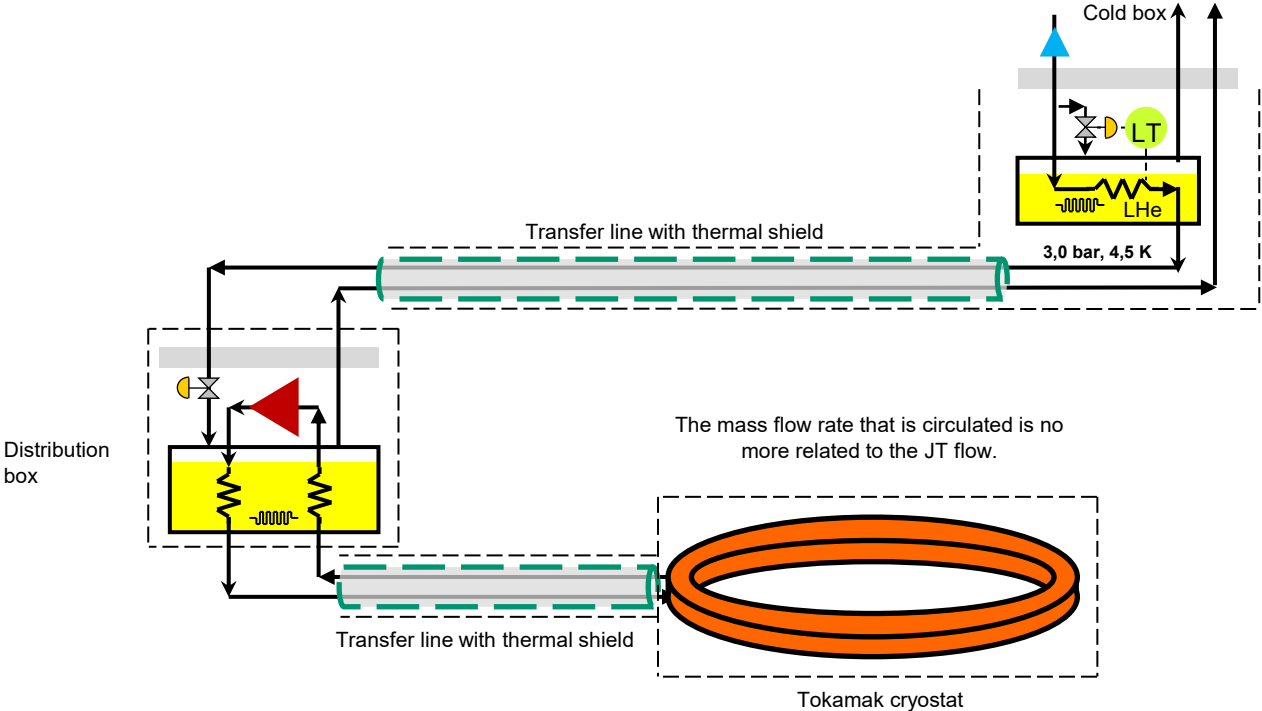
CICC FED FROM SUPERCRITICAL JT FLOW



CICC FED FROM RE-COOLED SUPERCRITICAL JT FLOW



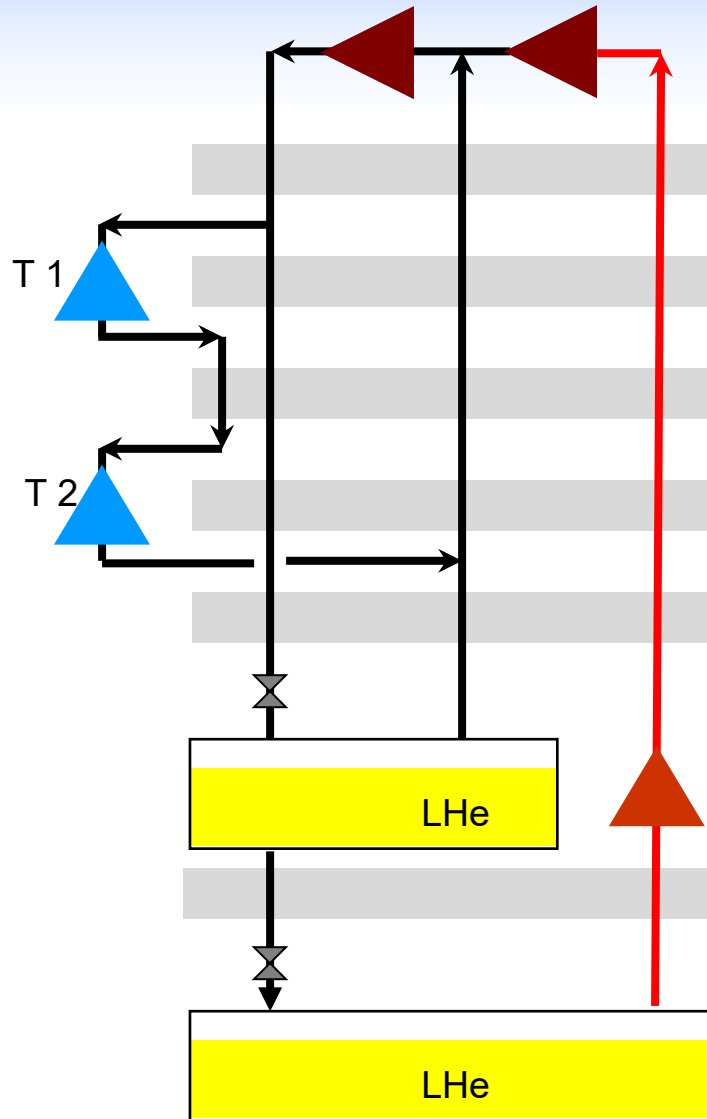
CICC FED BY HIGH FLOW SUPERCRITICAL



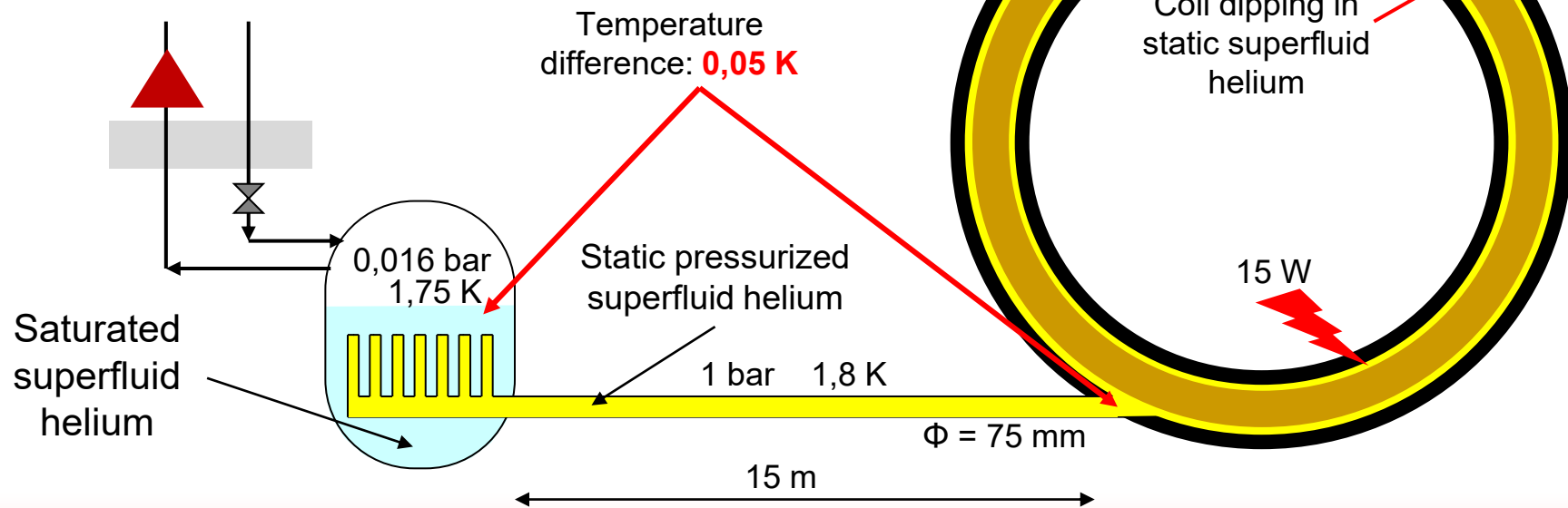
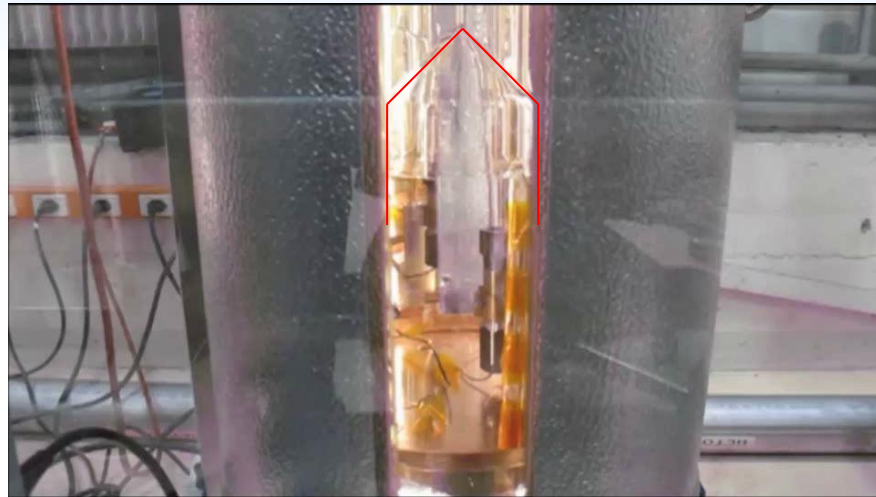
OPERATION AT LESS THAN 4.5 K

COOLING AT LESS THAN 4.5 K

Reminder



THE TORE SUPRA MAGNET COOLING



THE LHC MAGNET COOLING

