18 – Magnet - Control of the level and pressure at 2K

**Sensors and actuators used:**

- Pressure: PT681,

- Valve: FV642, FV680

- Control valve: CV602, CV680, CV583,

- Level: LI680, LT682, LT683

- Cryostat-2K: Boolean

|  |  |
| --- | --- |
| **The user chooses:** | **Initial conditions:** |
| - Level: LI680Maxi, LT682setpoint, LT682mini, LT683setpoint | - Magnet insert selected  - Sequences from 1 to 3 stopped  - Sequences 15 and 16 stopped  - Sequences 8 & 17 in operation |
| - Pressure: PT681setpoint |
| - Control valve: CV583%opening |

Stop OR S17 stopped

(Normal state or Yes ) & LI680<LI680Maxi

(Normal state OR Yes) & LI680>LI680Maxi

Start

Cryostat-2K = true (Pumping HX683 started )

Quench detection

Stop

Cooling Magnet

Open CV602

FV640, FV642 opened

CV583 regulated

PT681=PT681setpoint

CV680 regulated

LT683=LT683setpoint

LT682>LT682mini

Stop

Cryostat filling

Close CV602

Open CV583

CV680 regulated

LT683=LT683setpoint

Regulation

Two bath connected

Open FV642, FV640 Close FV680

CV602 regulated

LT682=LT682setPoint

CV583 regulated

PT681=PT681setpoint

CV680 regulated

LT683=LT683setpoint

LT682>LT682mini

Regulation

Two bath connected

OpenFV680

Open CV602

CV583 regulated

PT681=PT681setpoint

CV680 regulated

LT683=LT683setpoint

Close FV640, FV642

Close CV602, CV680

CV583 regulated

PT681=PT681setpoint

Stop

Cooling

CV602 closed

Regulation

Lower bath cooling

Close FV680,

FV640, FV642 opened

CV602 regulated

LT682=LT682setPoint

CV583 regulated

PT681=PT681setpoint

CV680 regulated

LT683=LT683setpoint