SPES Meeting 12/09/01

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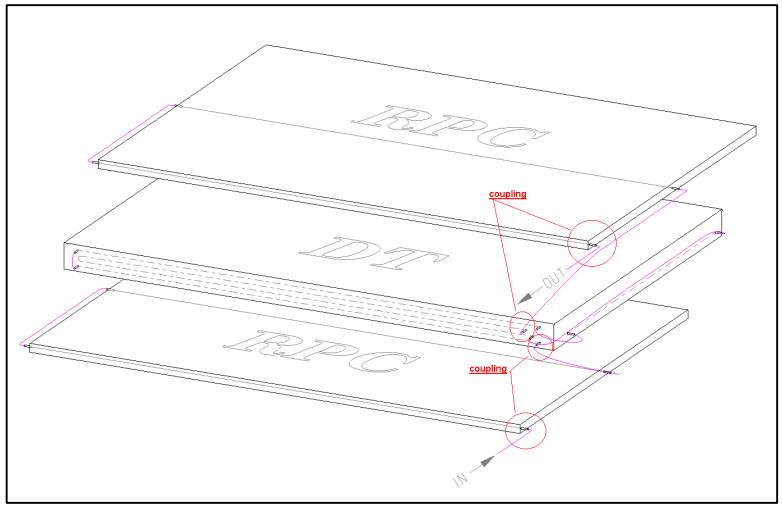
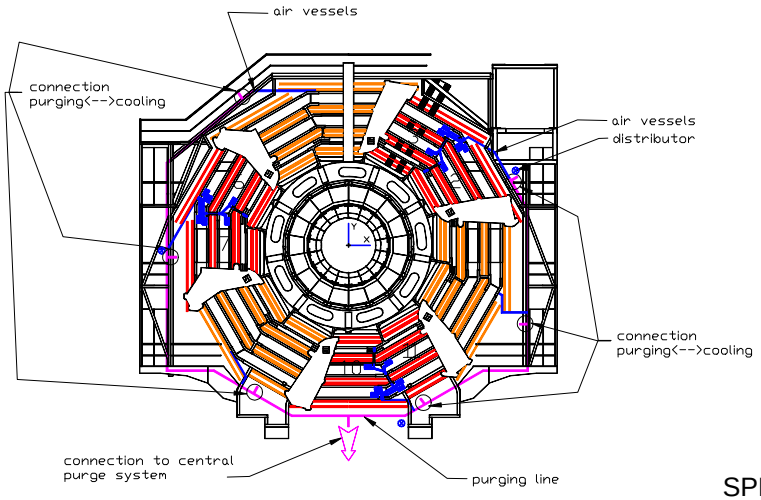
Topic

- **Muon test facility at ILK**
  - Backround of investigations
  - Test stand characteristics
  - Goals of investigations
  - Work phases

Backround of investigations





Muon cooling system:

highly branched and complex

(5 circular manifolds for 120 RPC/DT circuits in 6 different mounting positions)

Major concern:

trapped air inside RPC/DT circuits

$\rightarrow$ problem of “right flow guarantee” in each single RPC/DT circuit

Test stand characteristics

- **2 RPC/DT/RPC cooling circuits in series**
  → real situation at layers MB1/... and MB2/...

- **Full size assembly on a support with adjustable positions**
  → simulation of different mounting positions

- **Simulation of cooling ducts in extruded aluminum profiles by means of glass pipes**
  → easy visual observation of hydraulic processes inside cooling circuits

Goals of investigations

- **Impact of trapped air on hydraulic system in 3 different positions (30°, 90°, 150°)**

- **Determination of optimal filling and bleeding regime**

- **Determination of**

  Δp = f (flow rate)

  Δp = f (mounting position)

Work Phases

Phase 1 (01/09/01 - 31/10/01)

- Build-up of test stand

Phase 2 (01/11/01 - 31/01/02)

- Execution of measurements
- Submission of final report