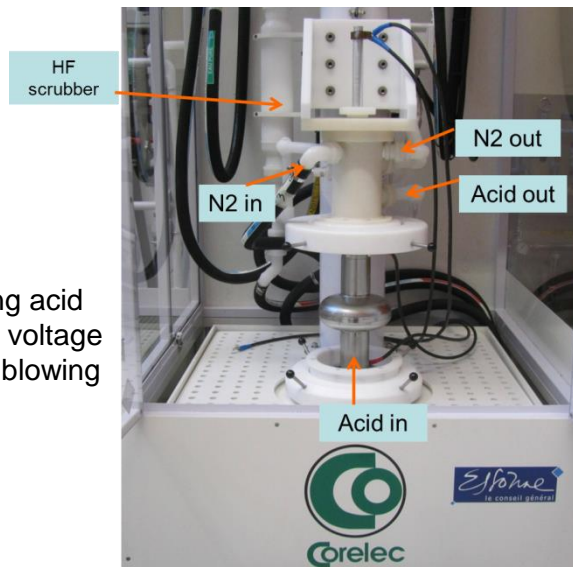
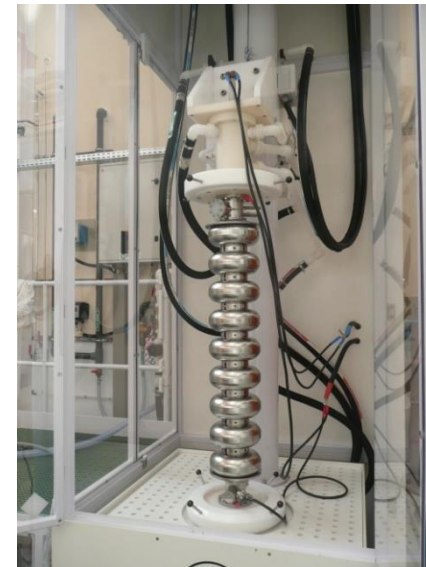



Vertical Electro-Polishing at CEA Saclay: update April 16th 2013





- Circulating acid
- Constant voltage
- Nitrogen blowing



 Fermilab
TB9RI025 cavity
Prior to VEP

- VEP of 1Cell and 9Cell cavities
- Focus on parameters: low voltage ($\sim 6V$) – high acid flow (25L/min)
 - Improved degassing (H_2 , O_2)
 - Lower heating
- Four 1-Cell cavities and 1 nine-cell cavity prepared by VEP
- But delay in results: Field Emission problems (cleanroom's water)

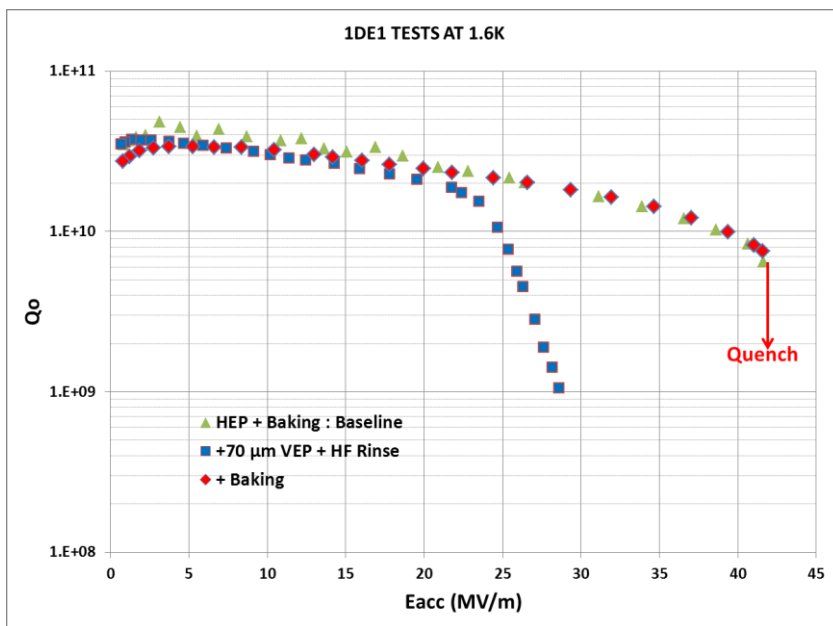


1DE1: Horizontal EP + 70 μm VEP

- Parameters: 6V & >24L/min
- Bright and smooth surface
- Performance before/after baking similar to HEP
- High gradient maintained after VEP



1DE1 after HEP + 70 μm VEP



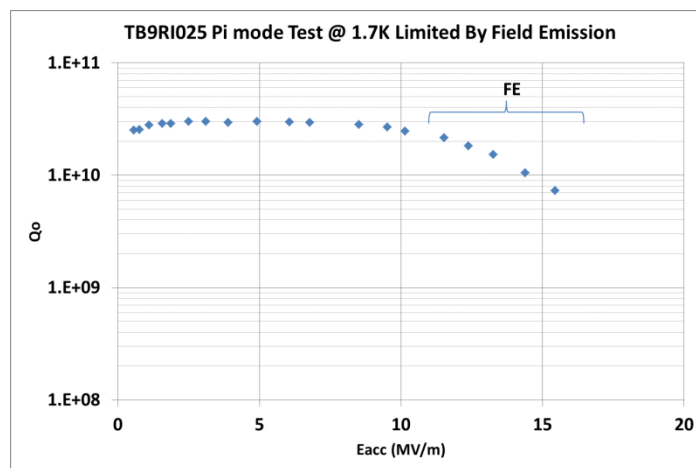
Aspects to improve:

- Low removal rate at 19°C: 0.2μm/min
- asymmetry: removal rate higher in the upper part of the cell (x 3)



Cavities VEP'ed at 6V & 25L/min:

- 1AC3 (34MV/m at previous test) + 70 μm VEP + Baking
- TB9RI025: (HEP + 60 μm VEP) last test impacted by Field Emission :



→ additional HF rinsing + HPR + assembly. Under testing...