



HQ Coil Fab at BNL

Jesse Schmalzle, BNL 04/27/10

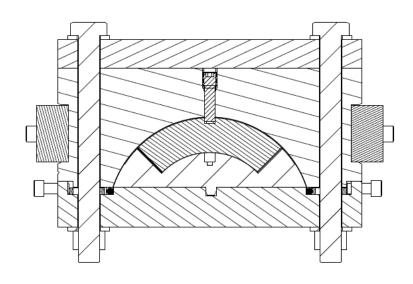


HQ Coil Status



- Four coils reacted and impregnated:
 - HQ02 Completed and shipped.
 - HQ04 Completed and shipped.
 - HQ05 Completed and shipped.
 - HQ06 Impregnated, final prep underway.



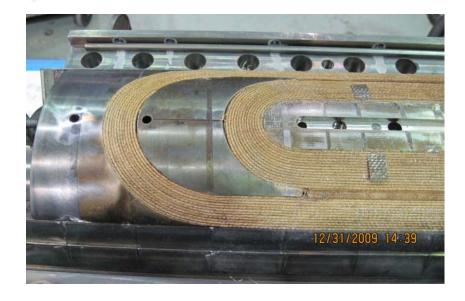




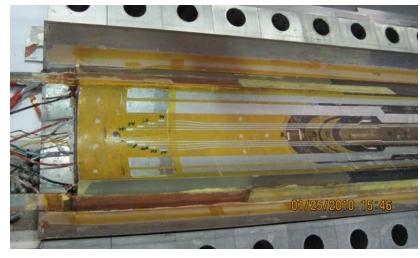


Misc photos













Anomalies / Discrepencies



- HQ05 Gap between pole segments prevented installation of pin.
 - Gap remained after reaction.



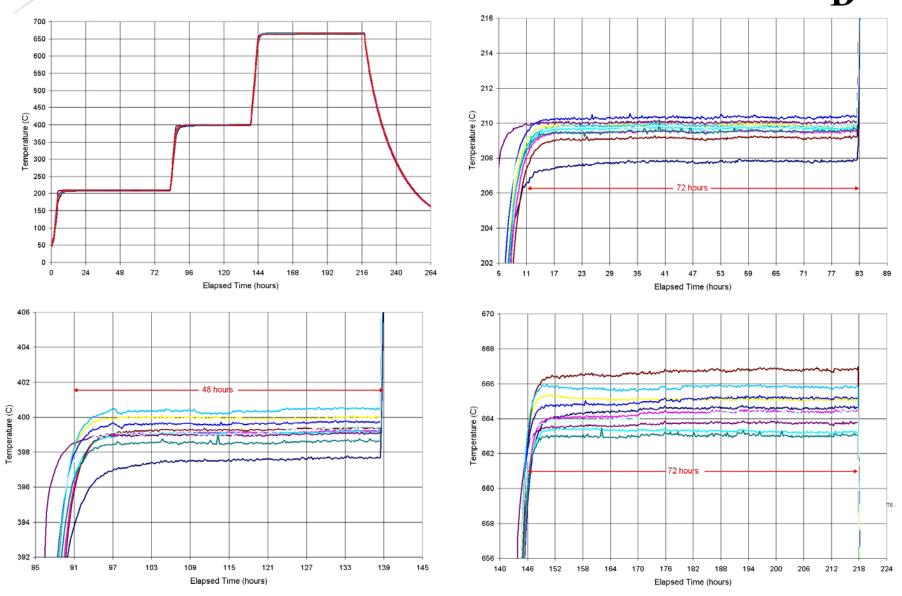


- HQ04 –short between coil and outer layer LE saddle.
- HQ06 Missing V-Tap (B5), copper flag broken very near coil OD.



HQ02 - Reaction

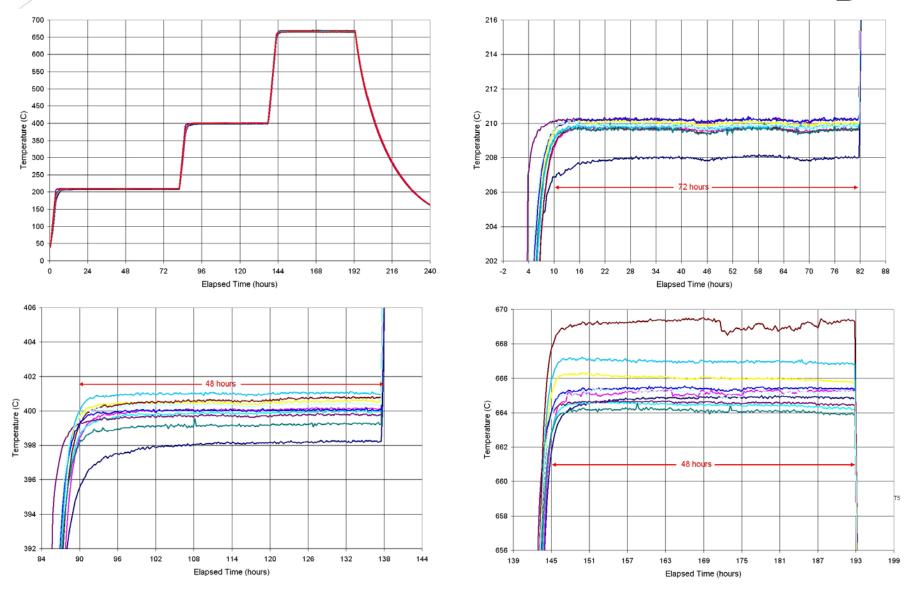
Superconducting
Magnet
Division





HQ04 - Reaction

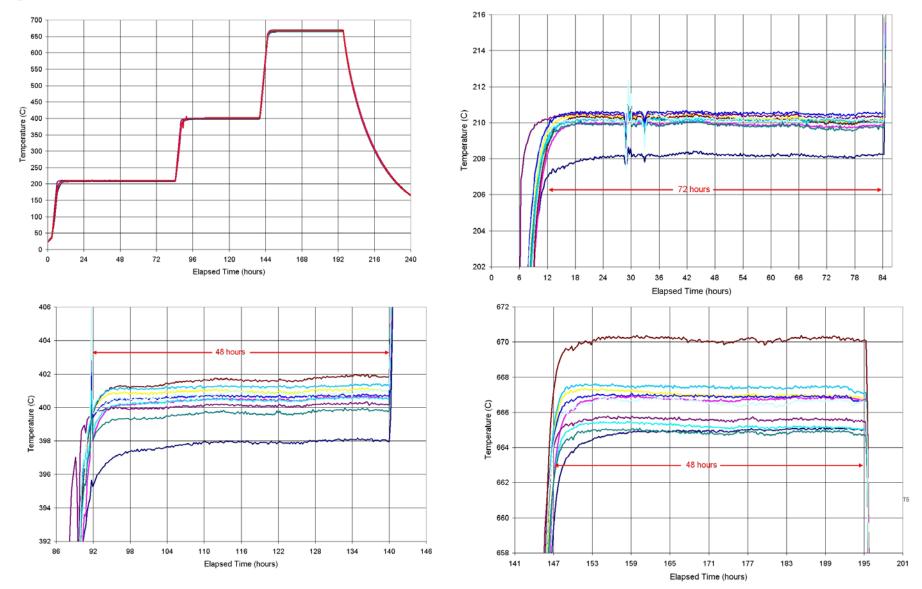






HQ05 - Reaction

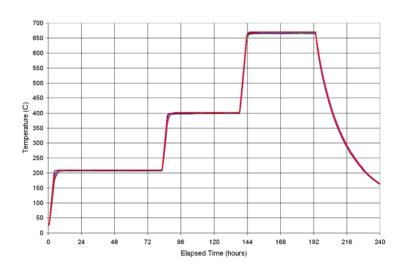


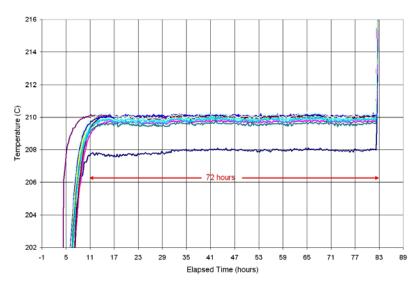


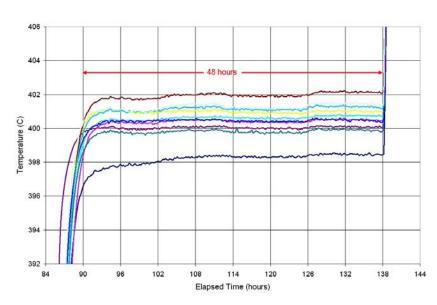


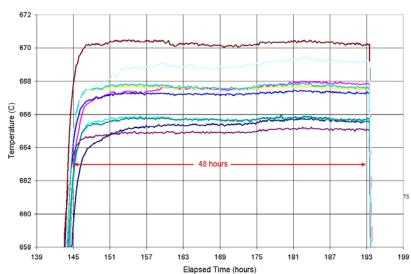
HQ06 - Reaction









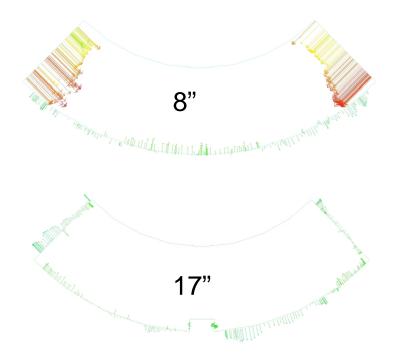


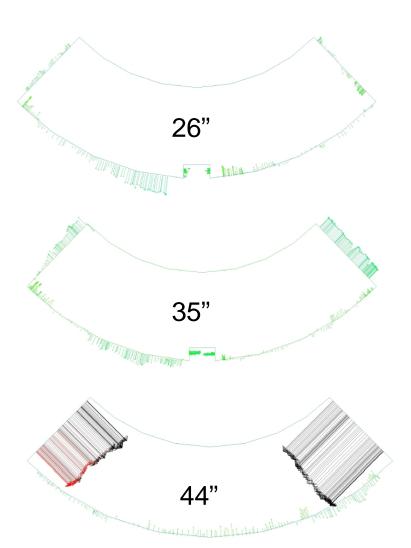


HQ02 - Coil Size



- Ends 2-8 mils small
- Center 1-2 mils large





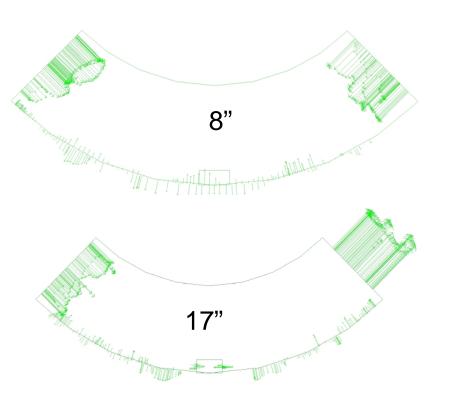
• Fit to coil OD (OD plus keyway in center).

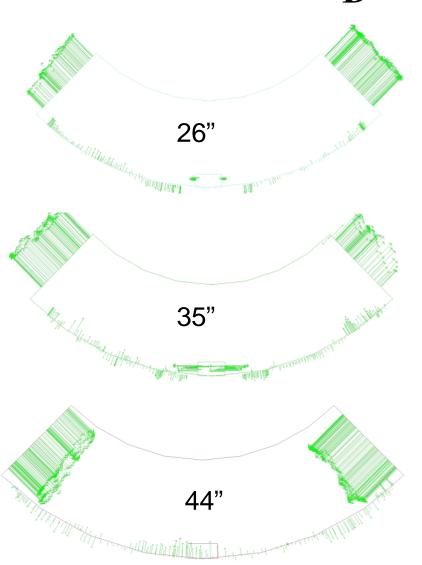


HQ04 - Coil Size

Superconducting
Magnet
Division

- Ends 2-7 mils small
- Center 2-7 mils large





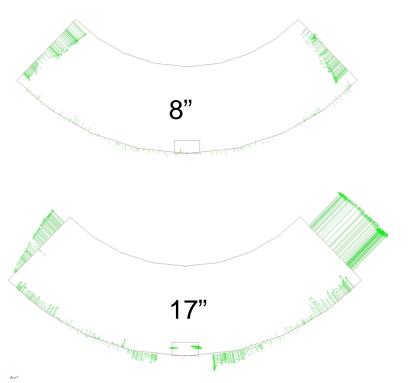
Fit to coil OD (OD plus keyway in center).

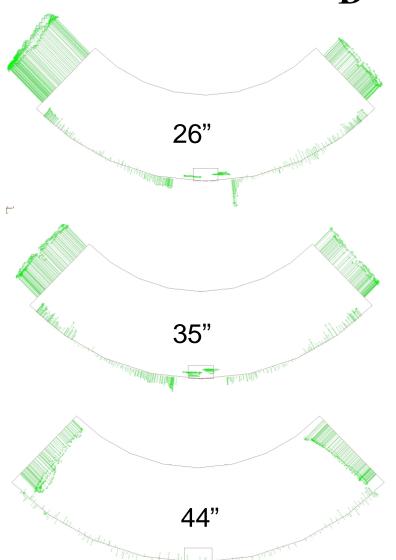


HQ05 – Coil Size

Superconducting
Magnet
Division

- Ends 1-4 mils small
- Center 2-8 mils large





Fit to coil OD (OD plus keyway in center).



HQ Coil Fab – Elapsed Time



|) | Task Name | | Duration | Start | Finish | r Dec | 1st Quarter | | 3rd Quarter | 4th Quarter ep Oct Nov Dec | 1st Quarter | 2nd Qu |
|---|---------------------------|----|----------|--------------|--------------|----------|-------------|-----------------|---------------|-------------------------------|-----------------------|-------------|
| | HQ02 | | 78 days | Mon 8/3/09 | Fri 11/20/09 | | oun hen mat | ראי maty oull | var Aug S | CP OCT MOV DEC | · I agui li en livigi | TWAL INTO |
| 2 | prep for reaction | | 12 days | Mon 8/3/09 | Tue 8/18/09 | | | | | | | |
| 3 | reaction | | 10 days | Fri 8/21/09 | Thu 9/3/09 | | | | | | | |
| 1 | OD prep for impreg | | 19 days | Tue 9/8/09 | Fri 10/2/09 | | | | (| - | | |
| 5 | ID prep for impreg / hang | | 14 days | Mon 10/5/09 | Thu 10/22/09 | | | | | | | |
| 6 | impregnation | | 6 days | Mon 10/26/09 | Mon 11/2/09 | | | | | | | |
| ' | final prep / wiring | | 13 days | Tue 11/3/09 | Fri 11/20/09 | | | | | | | |
| 3 | HQ04 | 48 | 68 days | Tue 10/27/09 | Thu 2/4/10 | | | | | — | | |
| 9 | prep for reaction | | 8 days | Tue 10/27/09 | Thu 11/5/09 | | | | | | | |
| 0 | reaction | | 7 days | Fri 11/6/09 | Tue 11/17/09 | | | | | | | |
| 1 | OD prep for impreg | | 11 days | Wed 11/18/09 | Fri 12/4/09 | | | | | | | |
| 2 | ID prep for impreg / hang | | 6 days | Mon 12/7/09 | Mon 12/14/09 | | | | | D | | |
| 3 | heater trouble | | 20 days | Tue 12/15/09 | Wed 1/13/10 | | | | | | | |
| 1 | impregnation | | 6 days | Thu 1/14/10 | Thu 1/21/10 | | | | | | 0 | |
| 5 | final prep / wiring | | 10 days | Fri 1/22/10 | Thu 2/4/10 | | | | | | | |
| 3 | HQ05 | 50 | 62 days | Fri 12/4/09 | Thu 3/4/10 | | | | | — | | |
| • | prep for reaction | | 4 days | Fri 12/4/09 | Wed 12/9/09 | | | | | • | | |
| 3 | reaction | | 12 days | Fri 12/11/09 | Wed 12/30/09 | | | | | | | |
| 9 | OD prep for impreg | | 12 days | Thu 12/31/09 | Fri 1/15/10 | | | | | | | |
|) | wait for impreg tool | | 9 days | Mon 1/18/10 | Thu 1/28/10 | | | | | | © | |
| | ID prep for impreg / hang | | 5 days | Fri 1/29/10 | Thu 2/4/10 | | | | | | Q | |
| 2 | impregnation | | 6 days | Fri 2/5/10 | Fri 2/12/10 | | | | | | • | |
| 3 | hold while work on 06 | | 3 days | Fri 2/12/10 | Wed 2/17/10 | | | | | | Q | |
| 4 | final prep / wiring | | 11 days | Thu 2/18/10 | Thu 3/4/10 | | | | | | | |
| 5 | HQ06 | 53 | 64 days | Mon 2/8/10 | Fri 5/7/10 | | | | | | ▼ | |
| 6 | prep for reaction | | 7 days | Mon 2/8/10 | Wed 2/17/10 | | | | | | D | |
| 7 | reaction | | 8 days | Thu 2/18/10 | Mon 3/1/10 | | | | | | | |
| 8 | OD prep for impreg | | 12 days | Tue 3/2/10 | Wed 3/17/10 | | | | | | | |
| 9 | wait for trace | | 5 days | Thu 3/18/10 | Wed 3/24/10 | | | | | | | |
| 0 | ID prep for impreg / hang | | 10 days | Thu 3/25/10 | Wed 4/7/10 | | | | | | | Φ |
| 1 | impregnation | | 6 days | Thu 4/8/10 | Thu 4/15/10 | | | | | | | 0 |
| 2 | hold while work on LQ | | 6 days | Fri 4/16/10 | Fri 4/23/10 | | | | | | | ٥ |
| 3 | final prep / wiring | | 10 days | Mon 4/26/10 | Fri 5/7/10 | 1 | | | | | | |