

MMM and TEMB - 2 March, 2009

# Status Report of Magnet Work Week 09 / 2009

#### Francesco Bertinelli - TE/MSC

On behalf of - and with several contributions from - surface and IC teams

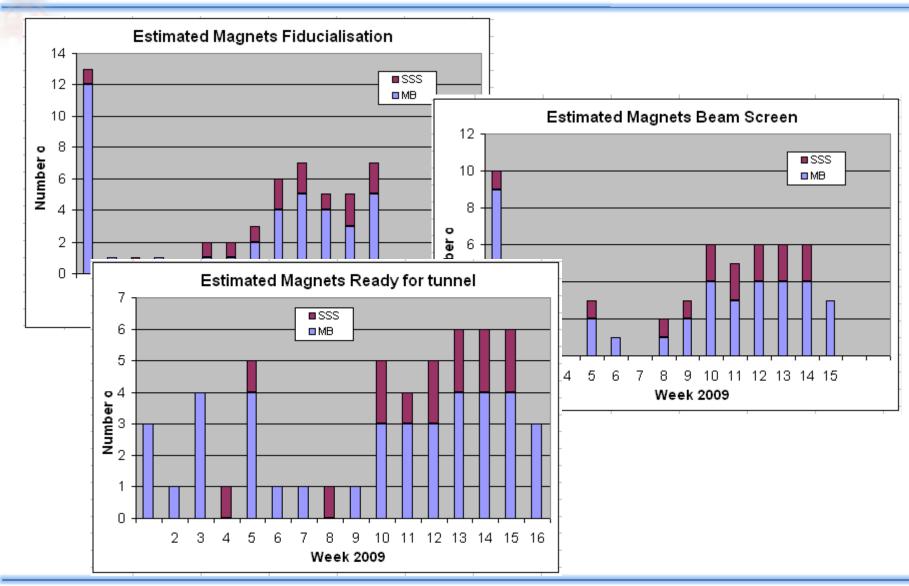


|                         | End activity week 5 - 2009               | End activity week 6 - 2009 | 69 2   1 1   55 2   9-2434-2436-SSS055 5   5 2   9-2434-2436-SSS055 5   5 2   End activity week 8 - 2009   Magnets   Quantity   2-1099-2192-SSS227 5   5-2446-3118-SSS195-SSS203 6   9-SSS221 3   43 2   1 1 |          |  |
|-------------------------|--|----------------------------|--|----------|--|
|                         | Magnets                                  | Quantity                   | Magnets  | Quantit  |  |
| Cryostating             | 2428-3118-555221                         | 3                          | 2433-2443-SSS195   | 3        |  |
| Cold testing            | 2427-2739                                | 2                          | 1085-SSS369  | 2        |  |
| Stripping               | 2432-555243                              | 2                          | 2739   | 1        |  |
| Beam screen integration | 2434-2436                                | 2                          | 2399-SSS055  | 2        |  |
| Tunnel preparation      | 2422-2624                                | 2                          | 2342-2399-2434-2436-555055   | 5        |  |
| Installation (=pose)    | 2624                                     | 1                          | 2434-2436  | 2        |  |
|                         | End activity week 7 - 2009               | End activity week 8 - 2009 |  |          |  |
|                         | Magnets                                  | Quantity                   | Magnets  | Quantity |  |
| Cryostating             | 2035-2103-2441-SSS225                    | 4                          | 1071-1092-1099-2192-SSS227   | 5        |  |
| Cold testing            | 2421-2429-2440-SSS221                    | 4                          | 2418-2435-2446-3118-SSS195-SSS203  | 6        |  |
| Stripping               | 1085-SSS369                              |                            | 2421-2429-SSS221   | 3        |  |
| Beam screen integration | 2432                                     | 1                          | 2739-SSS243  | 2        |  |
| Tunnel preparation      | 2432                                     | 1                          | SSS243   | 1        |  |
| Installation (=pose)    | 2342                                     | 1                          | 2432-2399  | 2        |  |
|                         | End activity week 9 - 2009               |                            |  |          |  |
|                         | Magnets                                  | Quantity                   |  |          |  |
| Cryostating             | 2108-SSS208-(2431-2442= spares)          | 4                          |  |          |  |
| Cold testing            | 2103-2444-2427-2690-SSS006-SSS225-SSS227 | 7                          |  |          |  |
| Stripping               | 2252-2418-2435-2440-SSS195-SSS203        | 6                          |  |          |  |
| Beam screen integration | 2421-2429-SSS369                         | 3                          |  |          |  |
| Junnel preparation      | 2422-2739                                | 2                          |  |          |  |
| Installation (=pose)    | 2422-2739-555055-555243                  | 4                          |  |          |  |

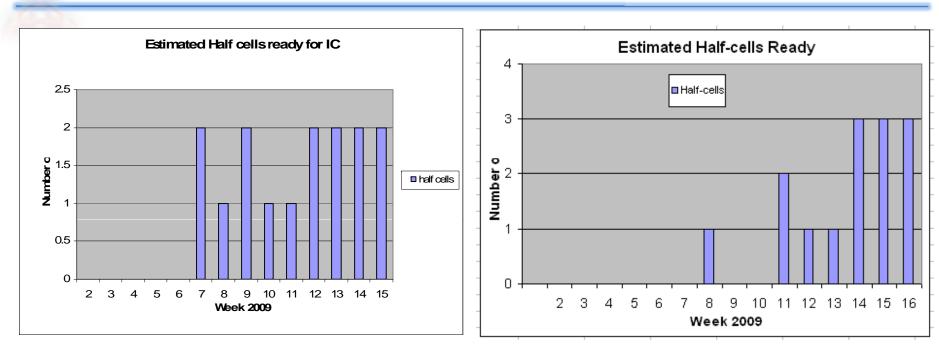


- Cold testing:
  - MB 2427 (18n  $\Omega$  old measurement) and MB 2690 (18 n  $\Omega$  old measurement) re-tested: results OK
  - MB 3383 being (again) prepared for retesting
  - <u>but</u> some technical difficulties (electrical NCR): MB 2103 and MB 2868
  - first successful measurements of 4th splice
- Stripping: ("...good week for stripping...")
  - 6 OK
  - improving quality and tooling
- Beam screen mounting (SMI2) now under pressure:
  - also aiming for 6 this week
  - welding support from MSC to VSC (in SMI2 and in tunnel)
  - new bench installed
  - clean magnets in series?
  - extra hours this week?
- Fiducialisation / Survey now also under same pressure







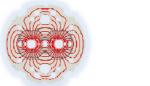


- Decision: SSS364 replaces SSS192 for Q31
- Decision: MB3383 changes slots with MB2103 (but this has electrical NCR ...)
- other slot changes (e.g. MB2435 with MB2868, makes another half-cell available W11 instead of W14) to be discussed



#### MB3110 (C24R3) and MB1109 (C23R3)





#### Installation Week 09/2009

| _                   | <= Point 3    |                 |           |            |                               |                   |                             |                  |                   |   |          |                   |                  |                   |               |
|---------------------|---------------|-----------------|-----------|------------|-------------------------------|-------------------|-----------------------------|------------------|-------------------|---|----------|-------------------|------------------|-------------------|---------------|
|                     | Function      |                 | *         |            | 8                             |                   | c                           | Q WITH<br>JUMPER |                   | *   |          | в                 |                  | c                 | ٩             |
|                     | Dourn (start) |                 | BBLA 3115 |            | LBALA 1091                    |                   | LBBLD 3099                  | 888228           |                   | LBALA 3152  |          | BBLA 1130         |                  | LBALB 2054        | 888196        |
|                     |               | 7479.2<br>C19R3 |           | 7494.8     |                               | 7510.5            |                             | 7526.1<br>Q19    | 7532.6<br>C20R3   | A20<br>A20  | 7548.3   | B20               | 7563.9           | C20               | 7579.6        |
| ŀ                   |               |                 |           |            |                               |                   |                             |                  |                   | \$12  |          |                   |                  |                   | -             |
| l                   | Dourn (start) | LE              | 3BLA 2035 |            | LBALA 1082                    | L                 | BBLD 1099                   | 888226           |                   | LBALA 1085  | LE       | BLA 3118          | L                | BALB 1071         | 888203        |
|                     |               | 7586.1<br>C21R3 | A21       | 7601.70    | B21                           | 7617.4            | C21                         | 7633.0<br>Q21    | 7639.5<br>C22R3   | A22   | 7655.2   | B22               | 7670.8           | C22               | 7666.6<br>Q22 |
| Γ                   |               | 1               |           |            | LBALA 2790                    |                   |                             | 1                |                   |   |          | BLA 2434          |                  |                   |               |
|                     | 7693.0        | ALA 2430<br>A23 | 7708.6    | B23        | 7724.3                        | .BBLD 2399<br>C23 | 888243<br>7739.9            | 7745.4           | LBALA 2436<br>A24 | 7762.1  | B24      | 7777.7            | BALB 2439<br>C24 | 888 277<br>7793.4 |               |
|                     | Dourn (start) | C23R3           | A28       | 7708.6     | 823                           | //24.3            | 623                         | Q23              | C24R3             | A24   | //62.1   | 824               |                  | 624               | 024           |
| ļ                   | Function      |                 | A         |            | 8                             |                   | c                           | Q WITH<br>JUMPER |                   | A   |          | в                 |                  | c                 | ٩             |
| ſ                   |               |                 |           |            |                               |                   |                             |                  |                   | \$12  |          |                   |                  |                   |               |
|                     |               | LE              | 38LA 3383 |            | LBALA 2739                    | L                 | BBLD 2422                   | 5 3 3 2 1 8      |                   | LBALA 2446  | LE       | BLA 2433          | L                | BALB 2698         | 88820         |
|                     | Dourn (sterf) | 7799.9<br>C25R3 | A26       | 7815.5     | B25                           | 7831.2            | C25                         | A.8<br>Q26       | Ţ                 | 7853.3 A28<br>c26R3   | 7869.0   | B26               | 7884.6           | C28               | 7900.3<br>Q28 |
| ┝                   |               | 24              | 27        |            |                               |                   |                             |                  |                   |   |          | 09.03.09          |                  |                   |               |
|                     |               | BBLA 2427       |           | LBALA 2690 | L                             | BBLD 1219         | 888055                      |                  | LBALA 2868        | LE  | BLA 2421 | L                 | BALB 2661        | 88836             |               |
|                     | Doum (start)  | 7905.8<br>c27R3 | A27       | 7922.4     | B27                           | 7938.1            | C27                         | 7953.7<br>Q27    | 7960.2<br>C20R3   |   | 7975.9   | B28               | 7991.5           | C:28              | 8007-2<br>Q28 |
| ŀ                   |               |                 |           |            |                               |                   | 12.03.09                    |                  |                   | \$12  |          |                   |                  | \$12              |               |
|                     |               | LE              | BLA 2419  | 1          | LBALA 2342                    |                   | .BBLD 2418                  | 888221           | 1                 | LBALA 2435  | LE       | BLA 2428          |                  | BBLA 2444         | 88800         |
|                     | Dourn (start) | 8013.7<br>C29R3 | A28       | 8029.3     | B29                           | 8045.0            | C29                         | 8060.6<br>Q29    | 8067.1<br>C30R3   | A30   | 8082.8   | B30               | 8098.4           | C:30              | 811<br>Q30    |
| ŀ                   |               |                 | 10.03.09  |            |                               |                   | 13.03.09                    | <b>C</b> \$11    |                   |   |          | 11.03.09          |                  |                   |               |
|                     |               | LE              | 3BLA 2440 |            | LBALA 3413                    | 1                 | BBLD 2429                   | 88192            |                   | LBALA 2624  | LE       | BLA 2262          | 1                | BBLA 2443         | 88827         |
|                     | Dourn (sterf) | 8120.6<br>C31R3 | A31       | 8136.2     | B31                           | 8151.9            | C31                         | Q31 8167.5       | 8174.0<br>C32R3   | A32   | 8189.7   | B32               | 8205.3           | C:32              | 8<br>Q32      |
|                     | - 1           |                 | 3BLA 2103 |            | LBALA 2182                    | -                 | BBLD 2108                   | 888227           |                   | LBALA 2177  |          | SBLA 1100         |                  | BALB 1246         | LQOBK 0       |
|                     | Dourn (start) | 8227.5<br>C33R3 | A33       | 8243.1     | B33                           | 8258.8            | C33                         | 8274.4<br>Q33    | 8280.9<br>C34R3   | 20/07/200   | 8295.6   |                   | 8312.2           |                   | 8327.9        |
| •                   |               |                 |           |            |                               |                   |                             |                  |                   |   |          |                   |                  |                   | Point 4       |
|                     |               | 8 lot libre     | 6         | Prévision  | réin <mark>c</mark> tailation | élément           | <mark>s réi</mark> nstailés | dd/mm/yy         | Date d            | e transport et mise<br>transport  |          | ) fixer courant S | 10 en fonctio    | n de l'avanceme   | nt            |
| Cantons électriques |               |                 |           |            |                               |                   | Jumper à reprendre          |                  |                   | transport depuis point 4 à fixer courant S10 en fonction de l'avancent<br>de la réparation des câbles refroidis en RA43 |          |                   |                  |                   |               |

#### Secteur 3-4 Situation semaine 9/09 (du 23.02.09 au 27.02.09) éinstallation des aimants semaines 11 (09.03.09 au 13.03.09) et 12 (16.03.09 au 20.03.09

Courtesy H. Gaillard



## Tunnel News Week 09/2009

- 3-4: ongoing
  - will solder Q19, A20, B20, C20 this week (Andrzej!)
- 1-2 shutdown: ongoing
  - will weld x4 M3 sleeves in 32R1 to 32L2 this week
- 5-6 shutdown:
  - CC headaches! Difficulty of accessibility to insulate 11L6 M1
  - displaced supports, seen deformation of M3 busbars
  - may need to open and inspect others:
    - 11L1 (8-1)
    - 11L5 (4-5)
    - 11L7 (6-7) good candidate warm this week
    - 11L3 (2-3)
- 6-7: warm, IC starting 4 March, RF ball test etc.



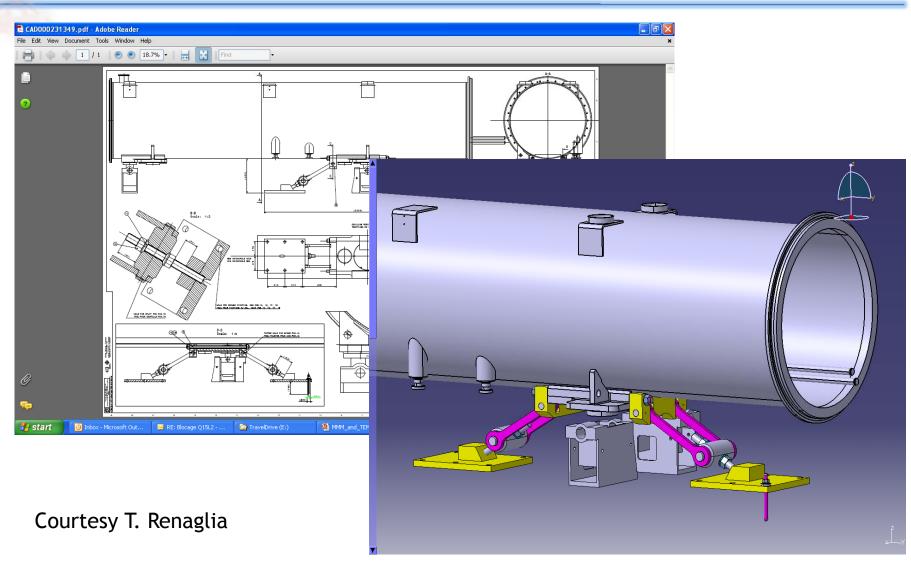
#### Pressure relief DN200 News

|            | Up to Wee | ek 8 - 2009       | Week S  | 9 - 2009          | Overall Done |         |                   |  |
|------------|-----------|-------------------|---------|-------------------|--------------|---------|-------------------|--|
|            | Magnets   | Nozzles<br>welded | Magnets | Nozzles<br>welded |              | Magnets | Nozzles<br>welded |  |
| Surface    | 19        | 22                | 6       | 6                 |              | 25      | 28                |  |
| Sector 1-2 | 6         | 9                 | 12      | 15                |              | 18      | 24                |  |
| Sector 3-4 | 0         | 0                 | 9       | 12                |              | 9       | 12                |  |
| Sector 5-6 | 2         | 3                 | 11      | 14                |              | 13      | 17                |  |
| Sector 6-7 | 0         | 0                 | 0       | 0                 |              | 0       | 0                 |  |
| Total      | 27        | 34                | 38      | 47                |              | 65      | 81                |  |

Courtesy JC. Perez



#### Jacks fixation (arcs)





### Jacks fixation prototype: Q15L2





# **TE Technical Board**

- Tuesday 2 March 14h-16h
- Jack fixations:
  - arc: discuss, to give green light to EN
  - clarify responsibilities for further work in LSS
- Pressure relief nozzles:
  - clarify responsibilities for further work in LSS
- Electrical Engineering Working Group: will try to organise an update of situation