

Status of Interconnect Works in the LHC Arcs and DS regions – weeks 14 and 15 (April 2 – 14, 2007)

C. Vollinger, AT-MCS (on behalf of the arc coordination team)

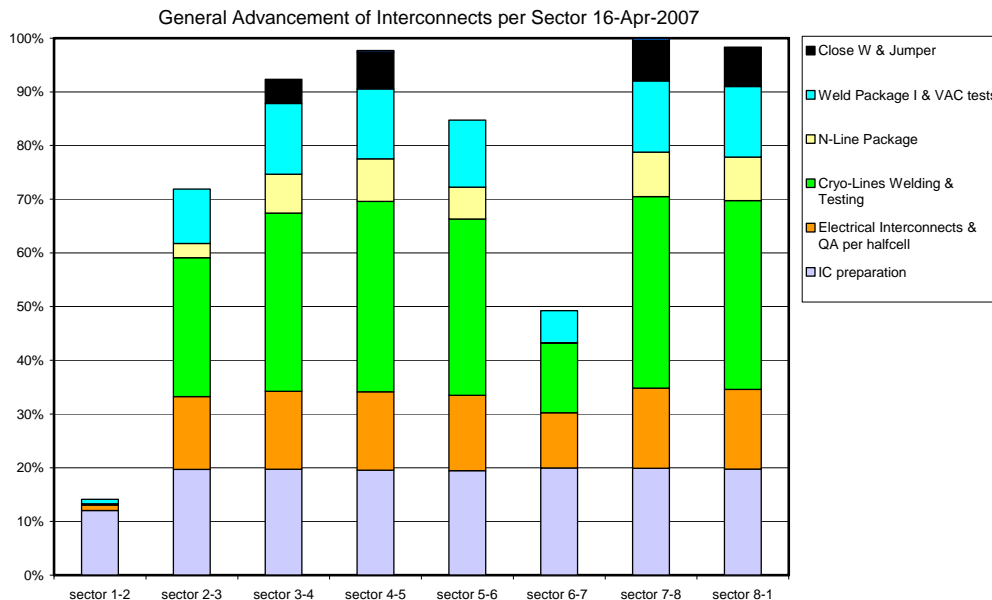
EDMS no. 836627

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during weeks 14 and 15 (April 2 – 14, 2007) in responsibility of the interconnection arc coordination team, starting with a general overview about the advancement per sector.

For the status of the VAC test, production rates, work progress, and number of operations foreseen and performed, data are reported for each sector separately.

The Dashboard

- Number of magnets in the tunnel: 1229 MB, 471 SSS, 111 LSS.



Data for General Advancement Plot is counted by number of interventions and grouped by activities as follows:

- IC preparation: Magnet alignment, IC pre-inspection, IC released for work,
- Electrical Interconnects & QA per halfcell: PAQ, US weld of spool pieces, brazing of main busbars,
- Cryo-Lines Welding & Testing: Welding of main busbar lines M1, M2, M3, weld K1 line, K2 line, K3 line, C' line, X line. Vacuum tests of K lines, C' line, X line.
- N-Line package: Insert N line, AIV 1, AIV 2, US welding of N line, weld of large sleeve for N line.
- Beam Pipes Welding & VAC tests. VAC sector test: Welding of V1, V2, E line and VAC tests V1, V2, E line. RF test magnet chain.
- Close W bellow and Jumper.
- VAC test for sector.

Sector coordination team:
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| <i>Sectors</i> | <i>Started</i> |
|-----------------------------|----------------|
| 7-8 | finished |
| 1-2 2-3 3-4 4-5 5-6 6-7 8-1 | Yes |

Sector 1-2: started in week 15!

Remarks:

1. The color coding of the general advancement plot matches the color coding of the other plots (snapshot and production rates).
2. The plots of the production rates also show the average production rate (IC/week) foreseen for the sectors and the ultimate production rates for the ideal case.
3. From week 9 on, we added a plot showing the general advancement per sector. For easy comparison, the starting dates in all plots is set to 1-Oct-06, except for sector 4-5.

Sector 1-2

- Sector 1-2 started in week 15 with soldering of main busbars and welding of E lines.
- 1st VAC test ready.

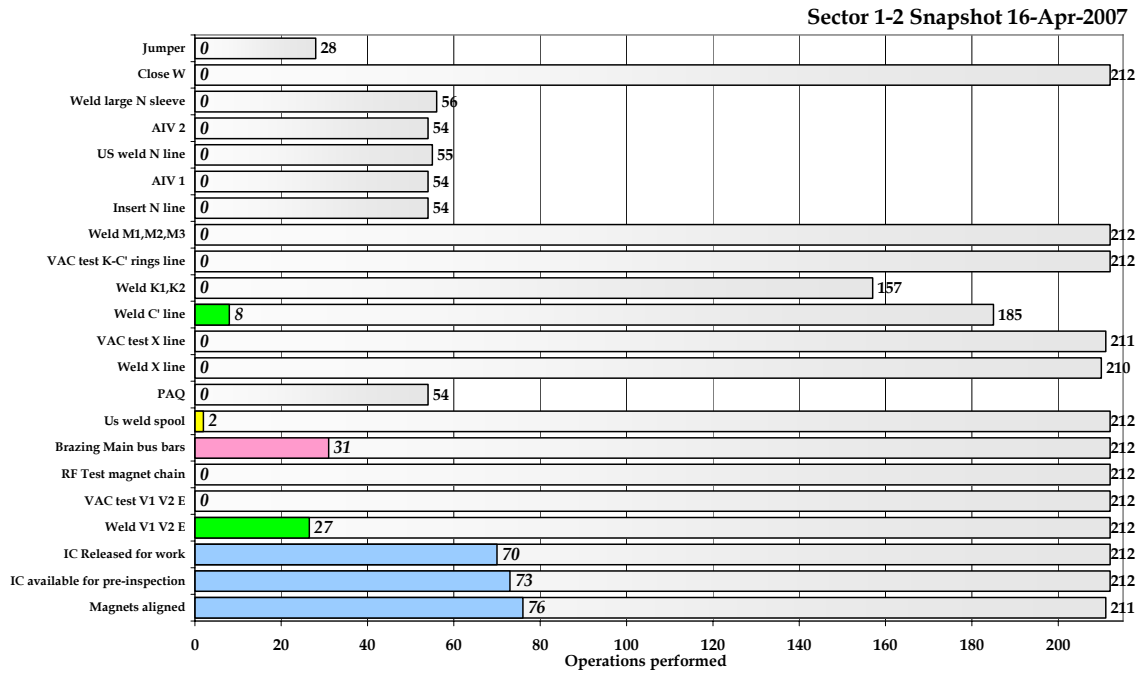


Fig. 1: Snapshot of work progress in sector 1-2 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 2-3

- 1st MPAQ accomplished.

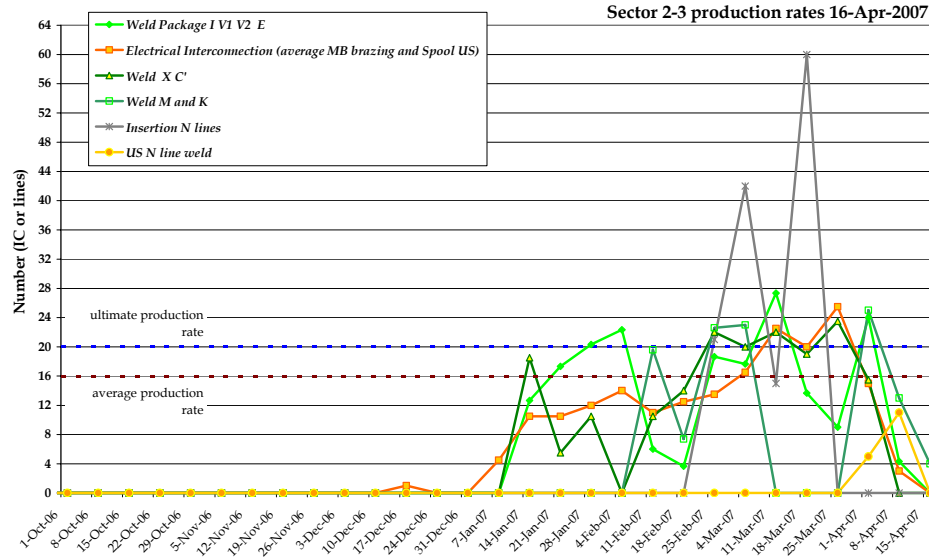


Fig. 2: Production rates in sector 2-3.

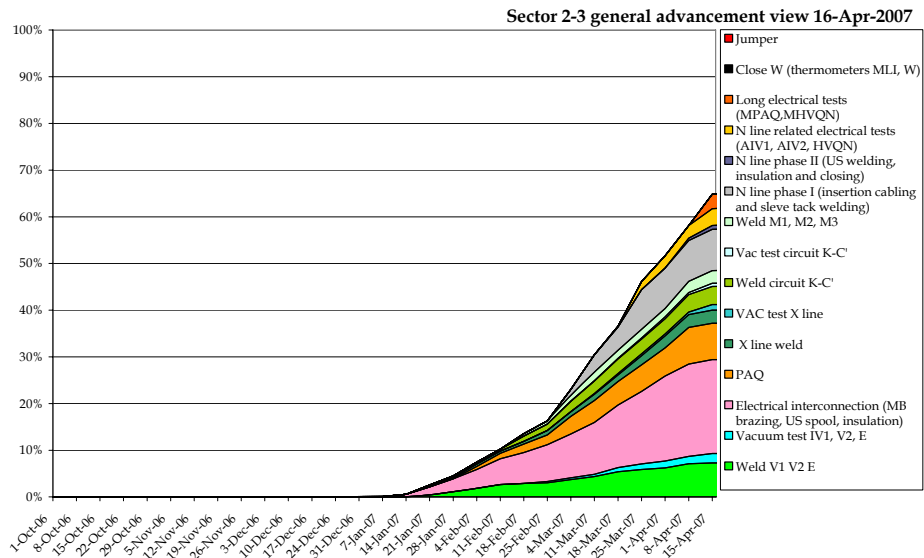


Fig. 3: General advancement view for sector 2-3.

Sector 2-3 Snapshot 16-Apr-2007

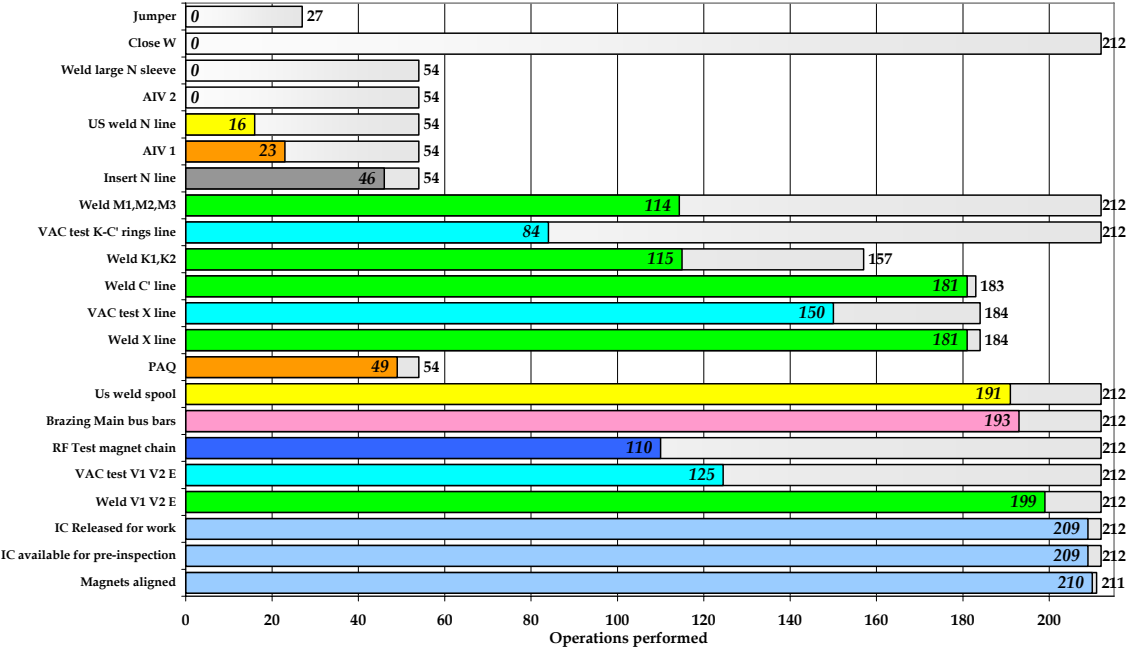


Fig. 4: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 3-4

- Work on jumpers completed (24 out of 28 finished, 3 pending due to problems with SSS500 series), closing of 3 VAC sectors.
- Pumping and testing of V-chain (DFBA to DFBA) accomplished.

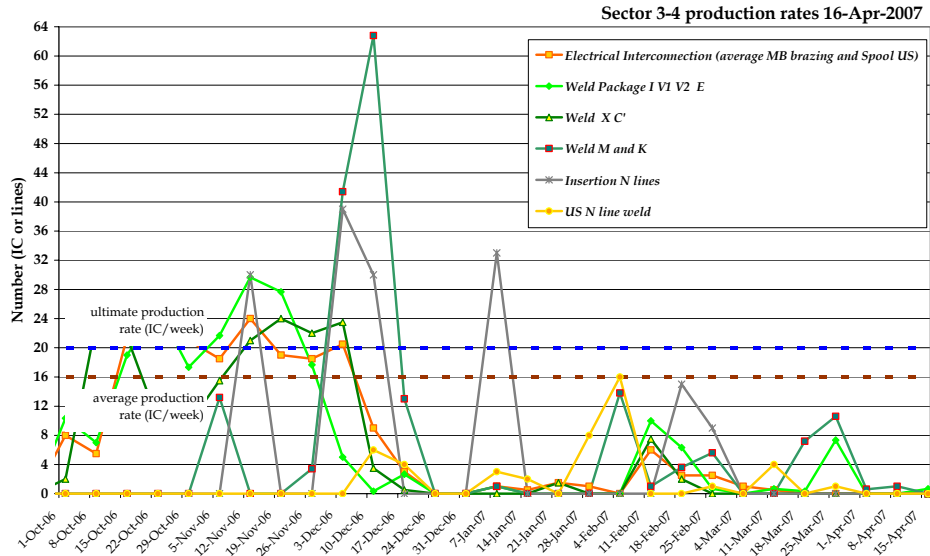


Fig. 5: Production rates in sector 3-4.

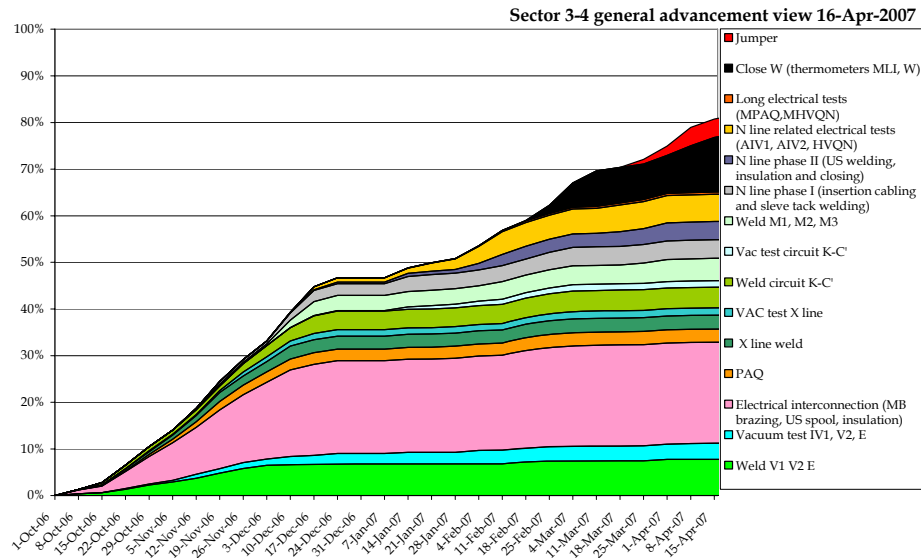


Fig. 6: General advancement view for sector 3-4.

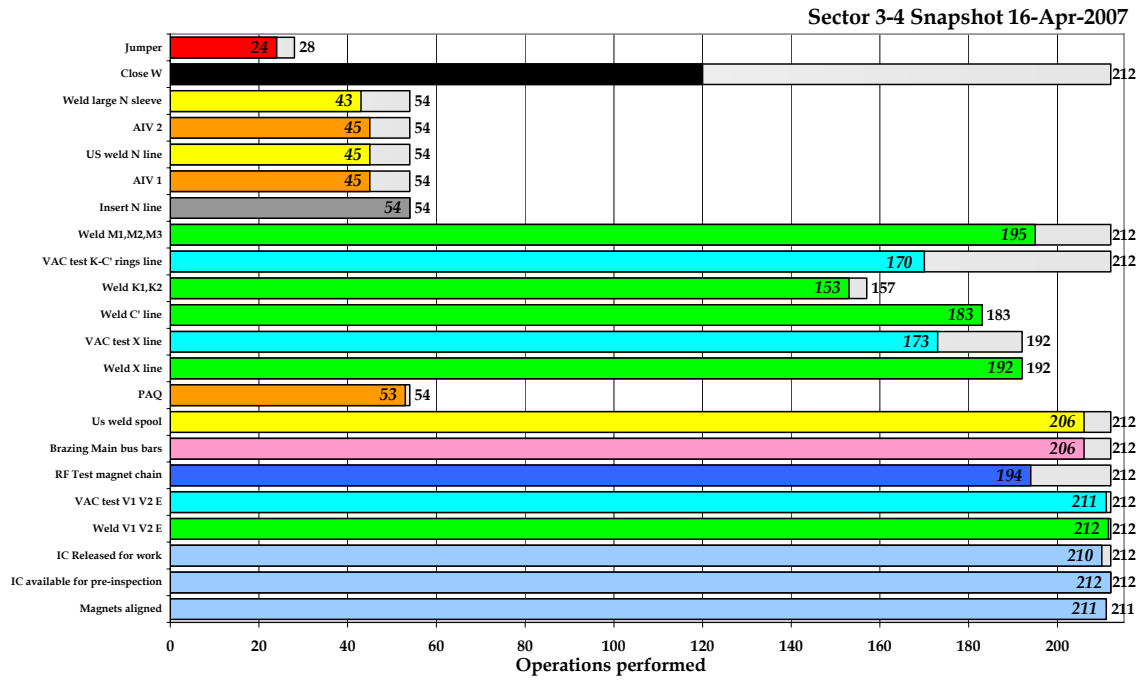


Fig. 7: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 4-5

- Activities in DS-zones re-started; repair on Q11.R4 finished.
- SSS500 series repairs according to planning.
- VAC accomplished 2 more sectors (12 leak tight out of 14*)

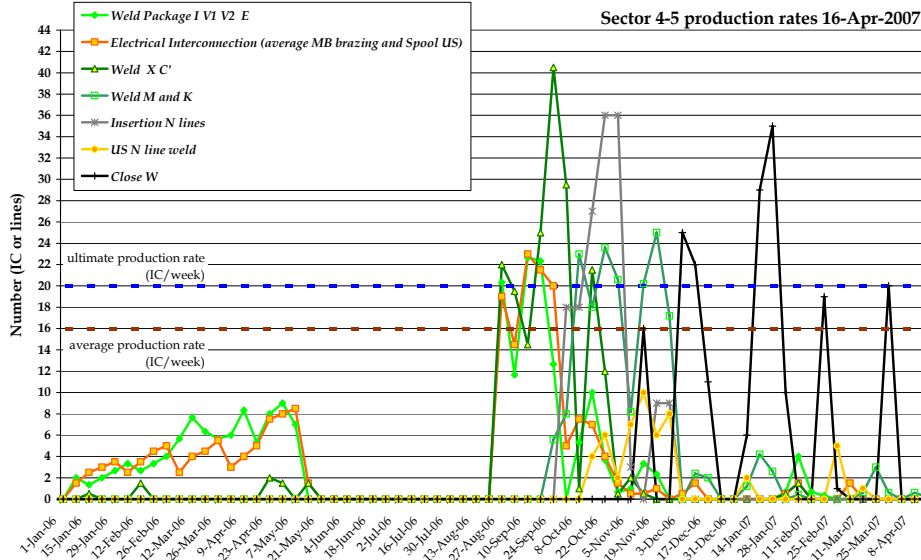


Fig. 8: Production rates in sector 4-5.

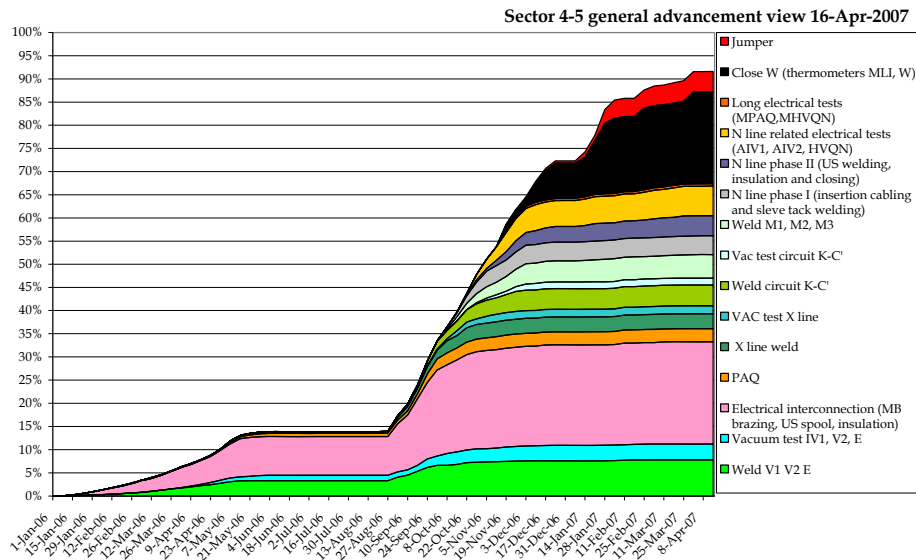


Fig. 9: General advancement view for sector 4-5.

* sector 4-5 consists of 14 VAC-subsectors, not 12 as reported last week.

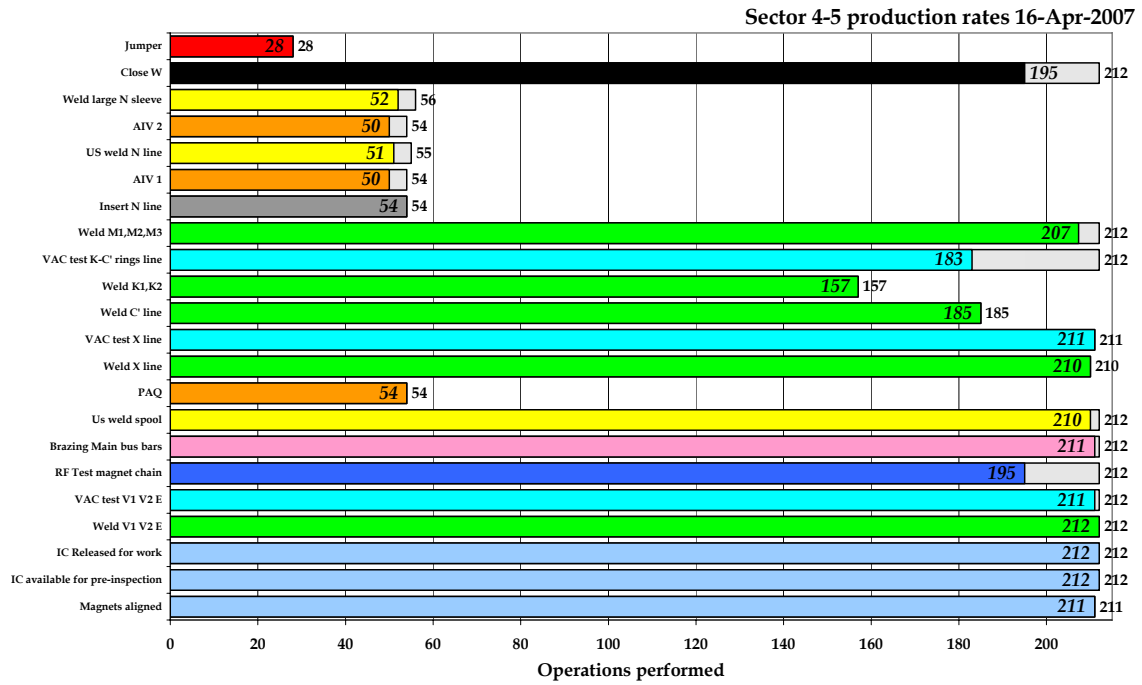


Fig. 10: Snapshot of work progress in sector 4-5 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 5-6

- Welding of jumpers started.
- In total, 70 interconnects are ready to be closed.

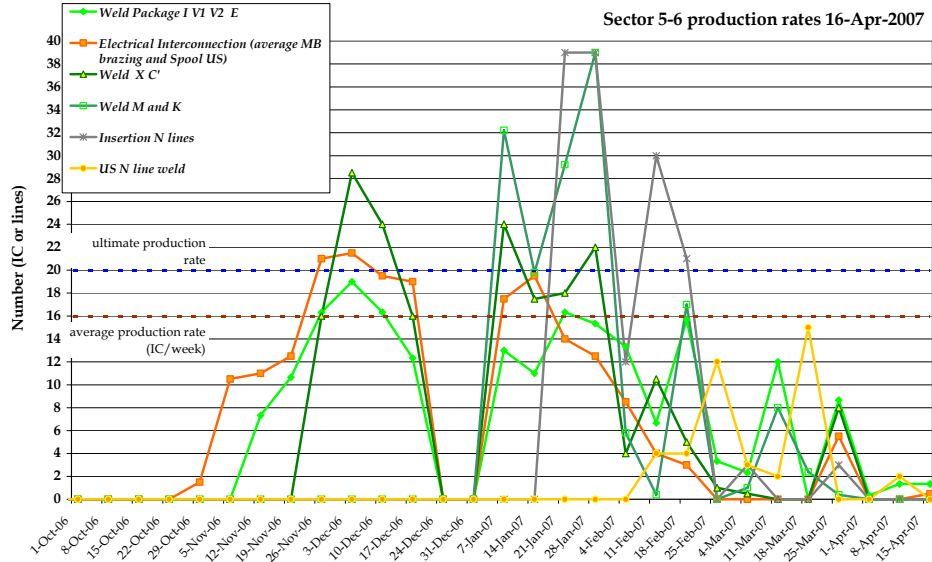


Fig. 11: Production rates in sector 5-6.

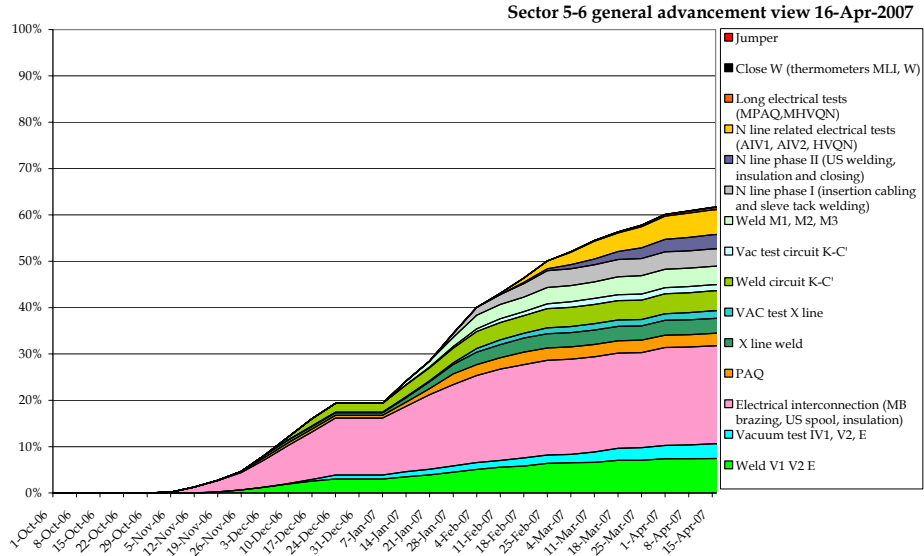


Fig. 12: General advancement view for sector 5-6.

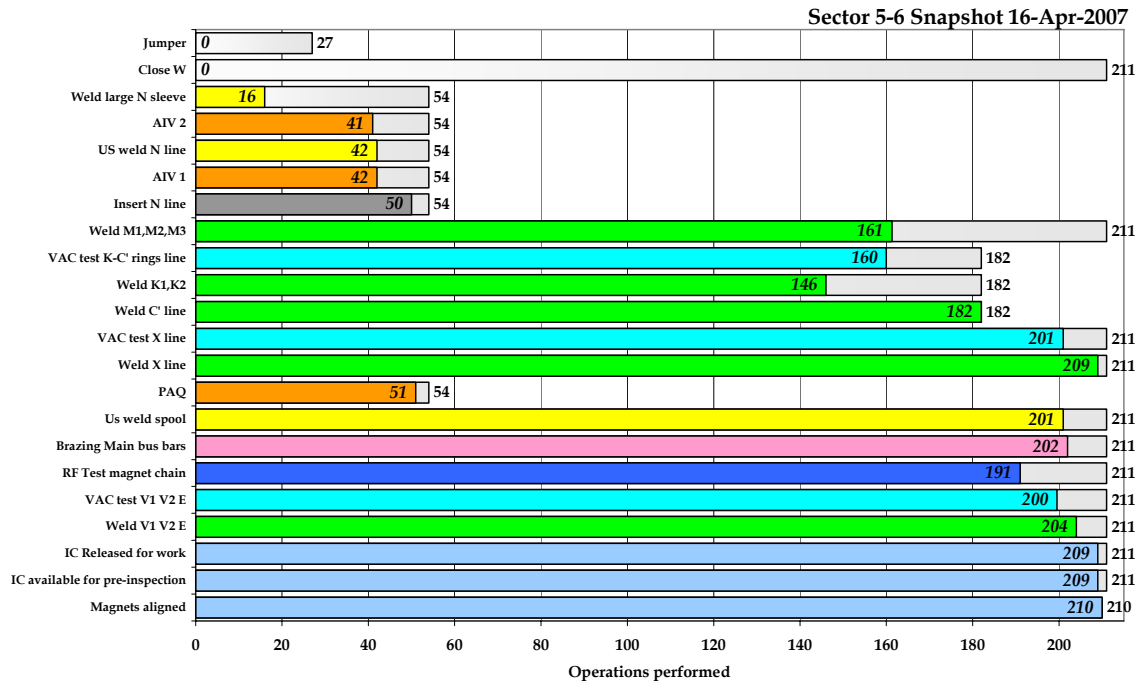


Fig. 13: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 6-7

- Welding of all E lines finished.
- Brazing of all Y lines finished; welding of plug-in-modules ongoing.

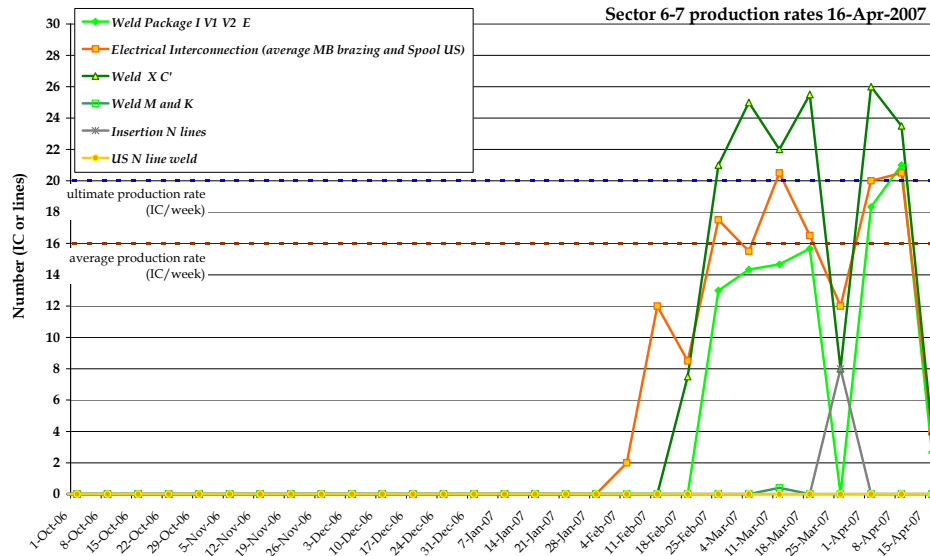


Fig. 14: Production rates in sector 6-7.

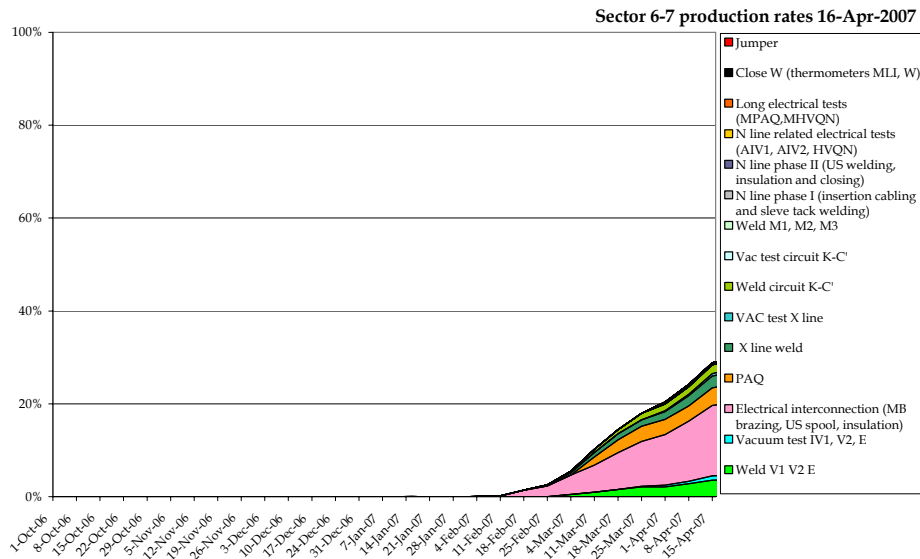


Fig. 15: General advancement view for sector 6-7.

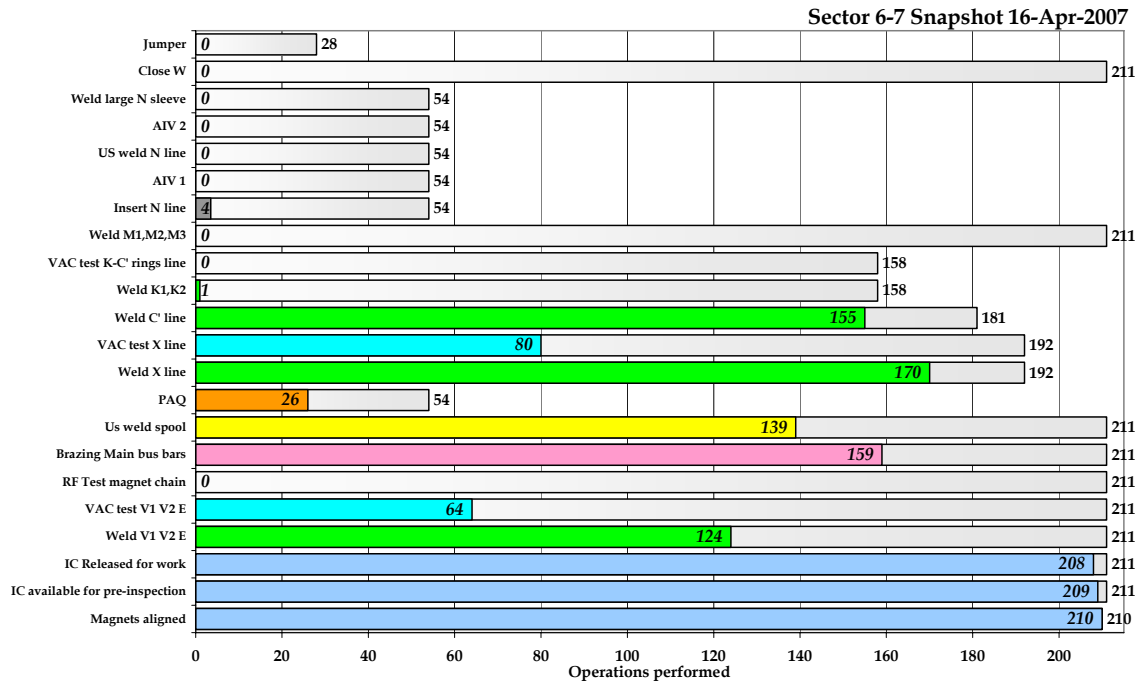


Fig. 16: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 8-1

- Repair on Q11.R8 finished.

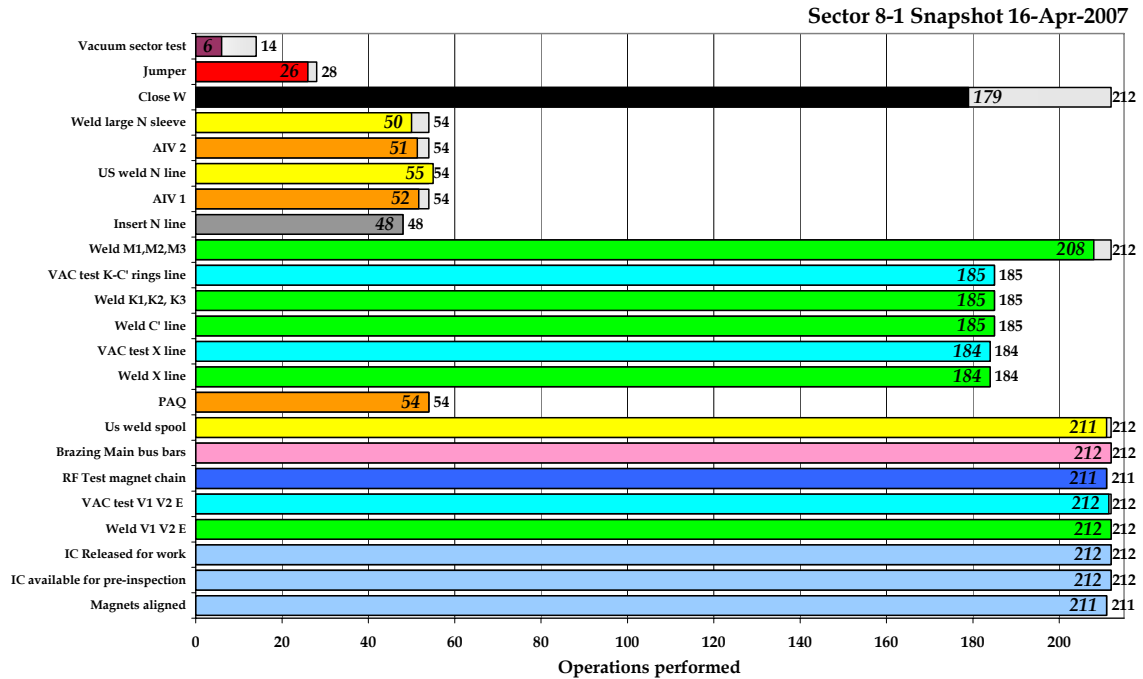


Fig. 17: Snapshot of work progress in sector 8-1 showing the number of operations achieved in total with respect to the total number of operations needed.

Vacuum Tests by Sector

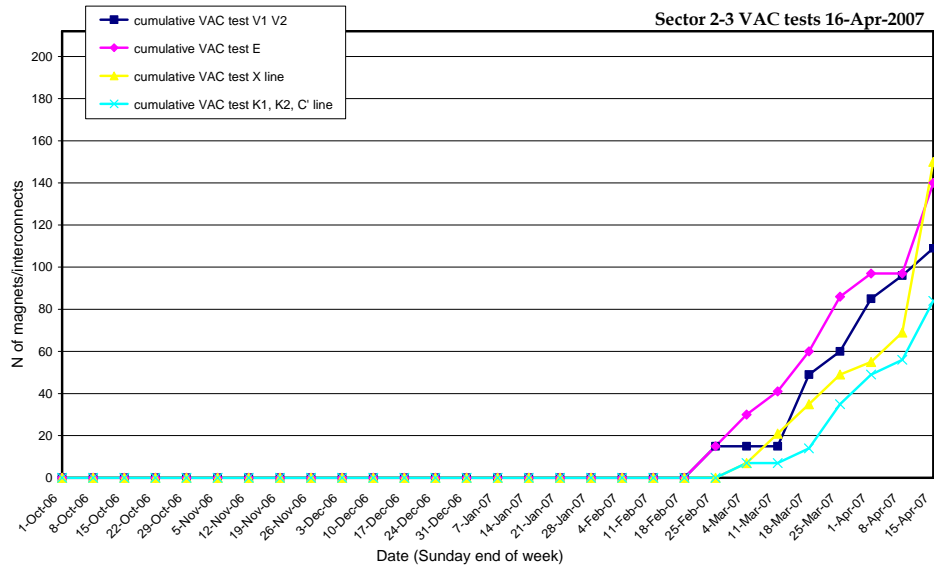


Fig. 18: Status of the VAC tests in sector 2-3.

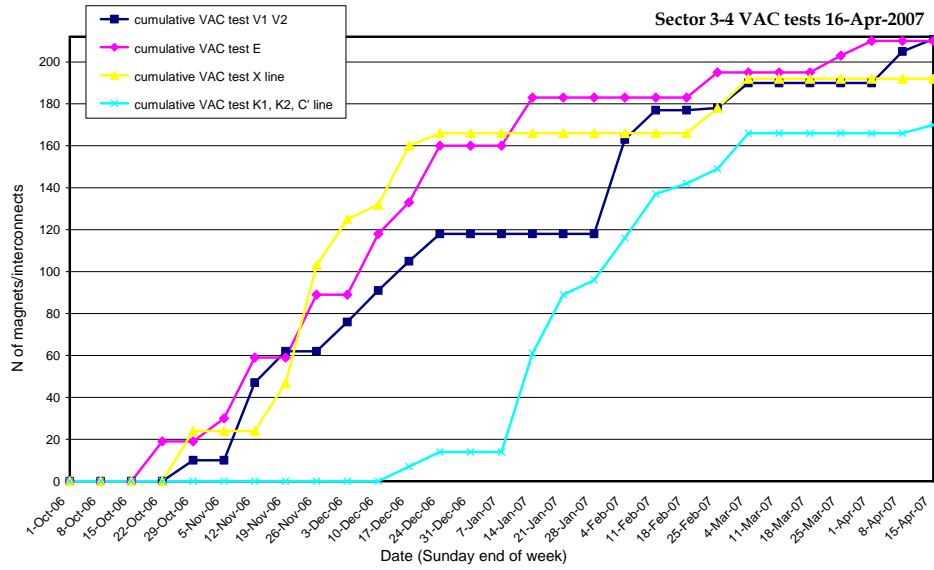


Fig. 19: Status of the VAC tests in sector 3-4.

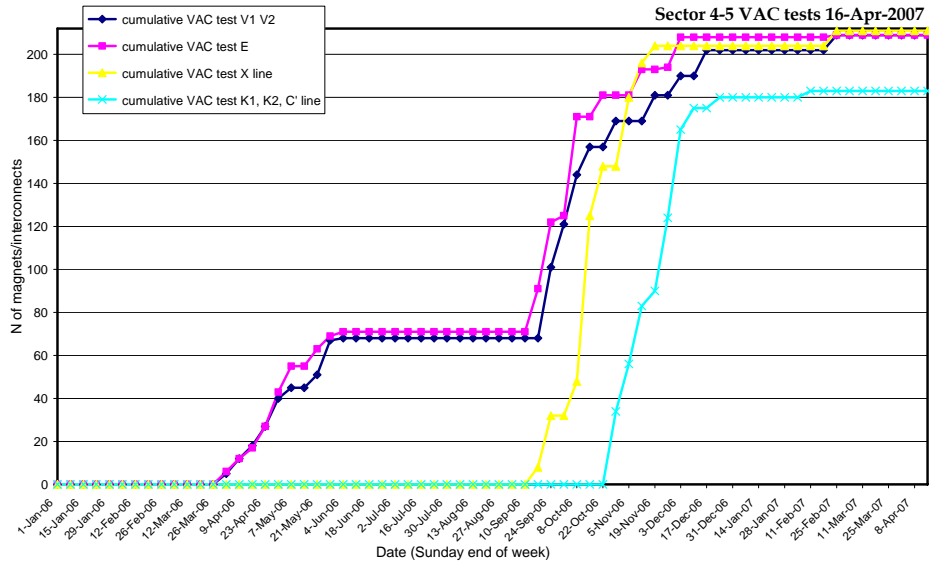


Fig. 20: Status of the VAC tests in sector 4-5.

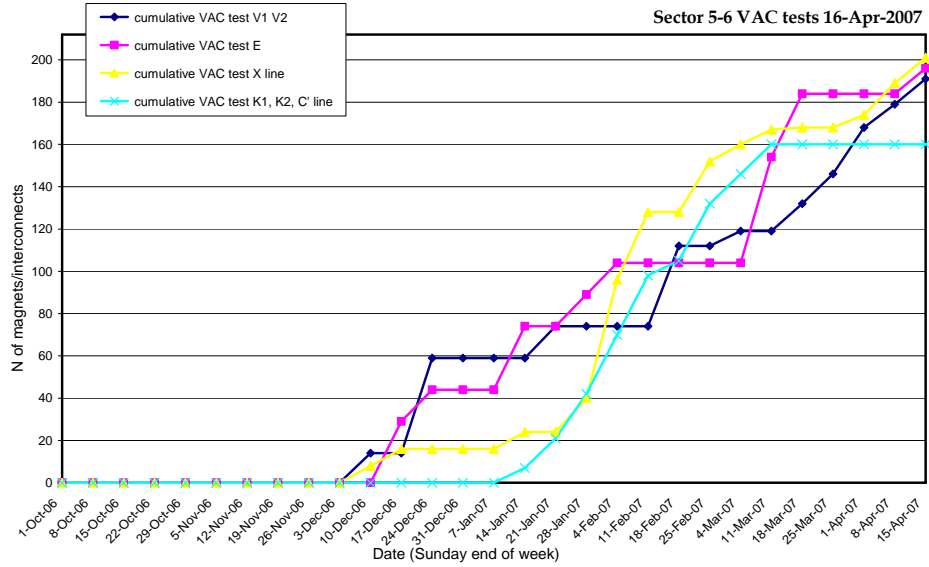


Fig. 21: Status of the VAC tests in sector 5-6.