

Status of Interconnect Works in the LHC Arcs and DS regions – week 23 (June 04 – June 09, 2007)

O. Denis, AT-MCS (on behalf of the arc coordination team)

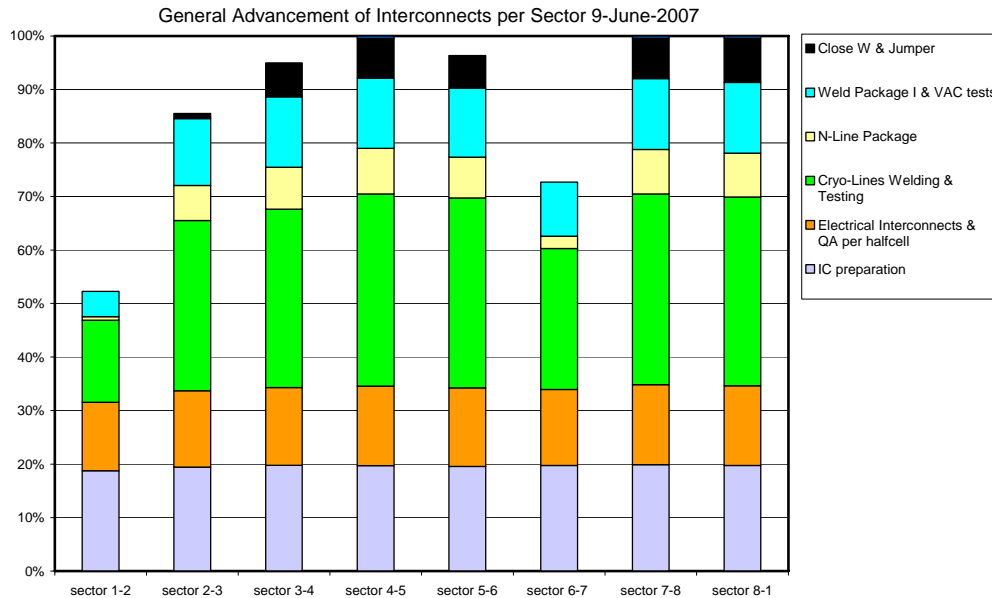
EDMS no. 848915

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during week 23 (June 04 – June 09, 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: 1230 MB, 473 SSS, 113 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.

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<i>Sectors</i>	<i>Started</i>
4-5 7-8 8-1	finished
1-2 2-3 3-4 5-6 6-7 8-1	Yes

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.
4. For sectors that are completed, we will suppress the plots and simple give the work status instead.

Sector 1-2

- Insertion of N lines ongoing.
- Weld of Plug-in-modules started.
- Weld of K lines started.

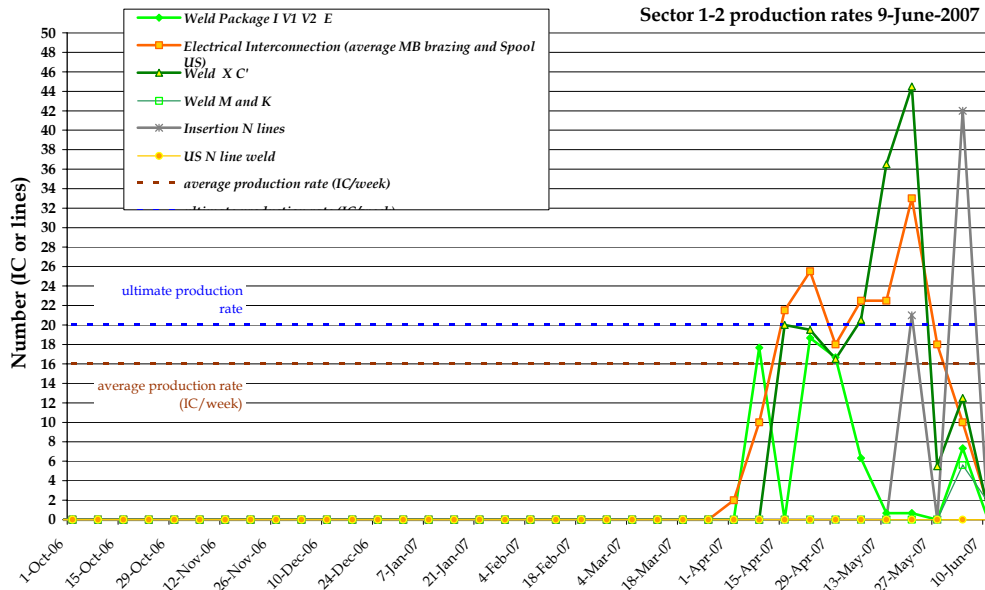


Fig. 1: Production rates in sector 1-2.

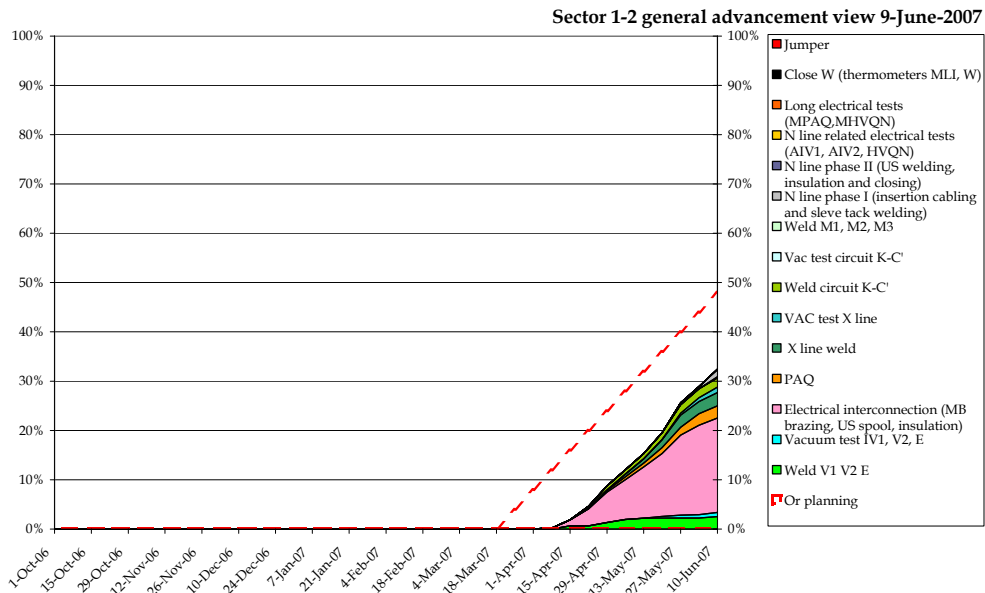


Fig. 2: General advancement view for sector 1-2.

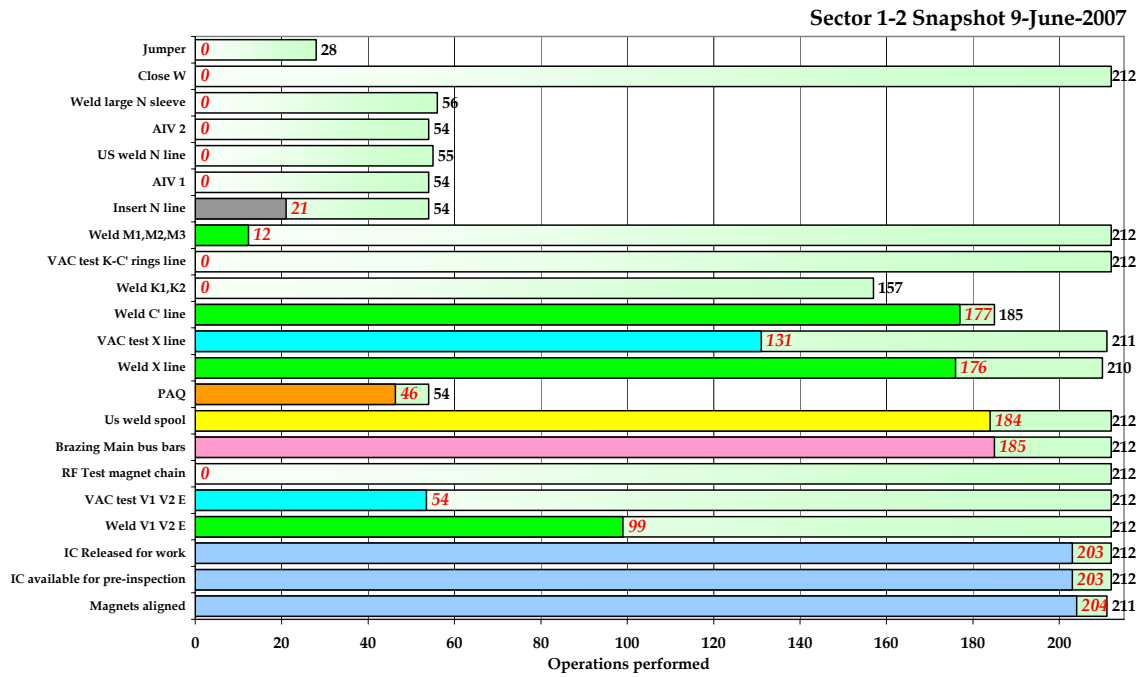


Fig. 3: Snapshot of work progress in sector 1-2 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 2-3

- Repair of SSS500 in progress.
- Closure of W bellow started.

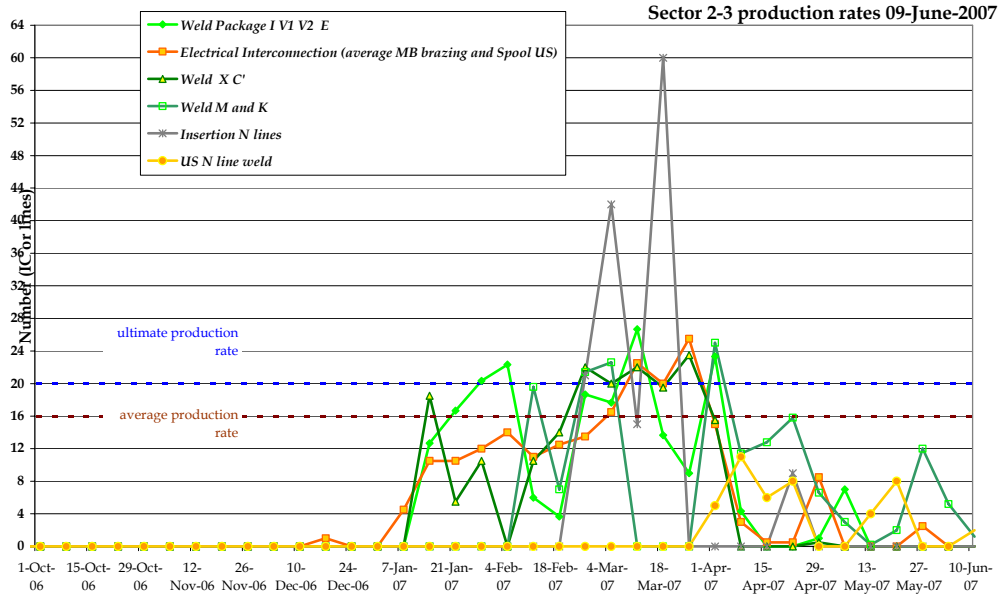


Fig. 4: Production rates in sector 2-3.

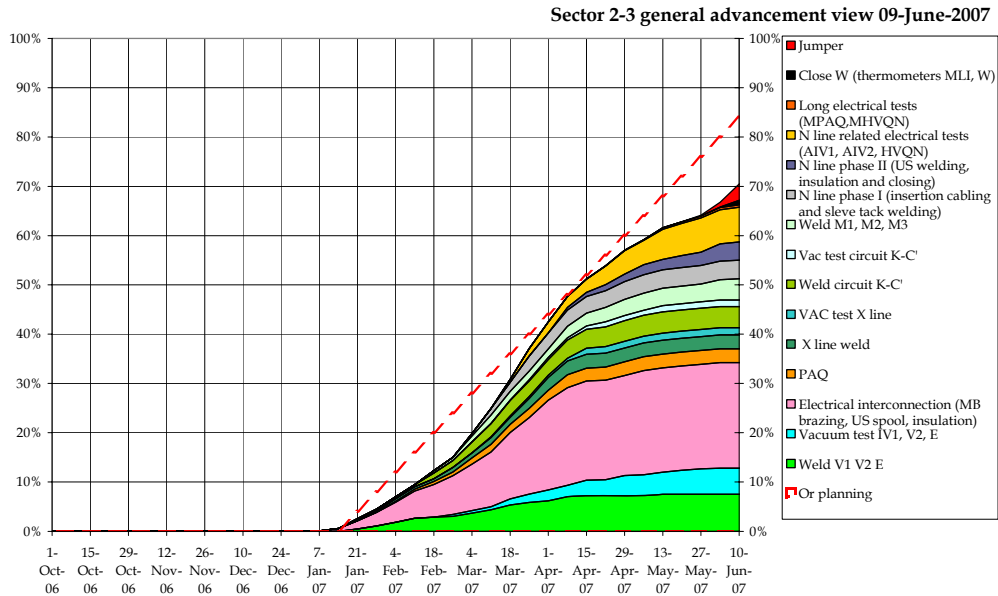


Fig. 5: General advancement view for sector 2-3.

Sector 2-3 Snapshot 09-June-2007

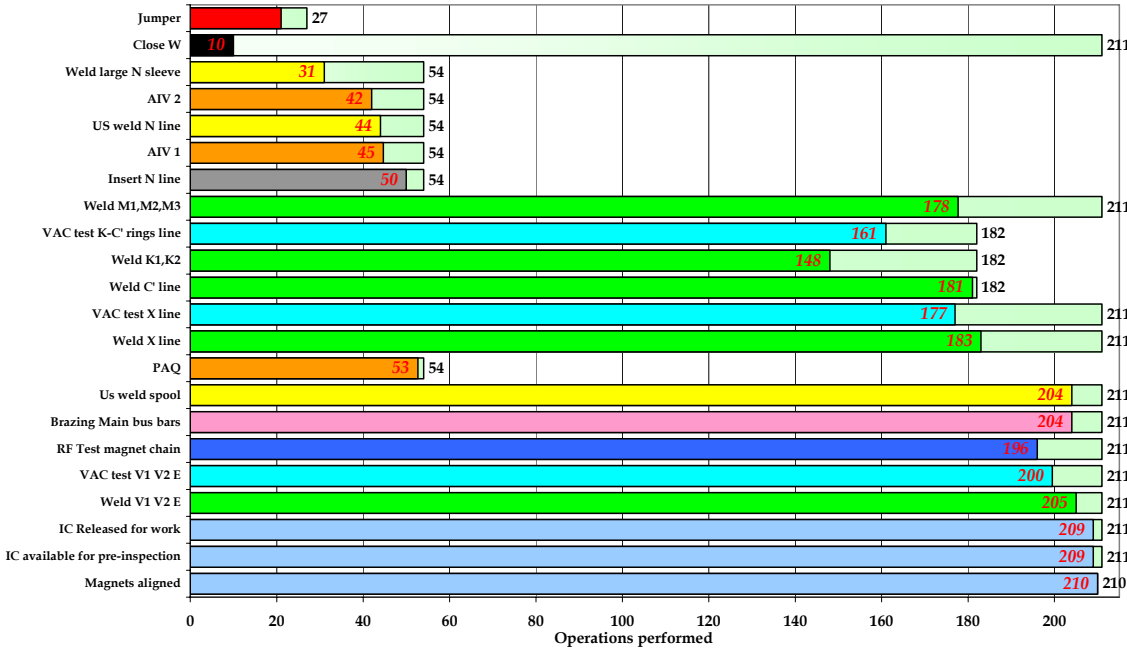


Fig. 6: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 3-4

- 7 sectors leak tight, 3 sectors with leak.
- DSL4 : closure started within 2 sectors.
- Repair of Q9R3 (SSS500) finished. The hole necessary for the repair was closed. This repair procedure was validated and will be applied to 2 other cold masses of Q8R3 and Q10R3.

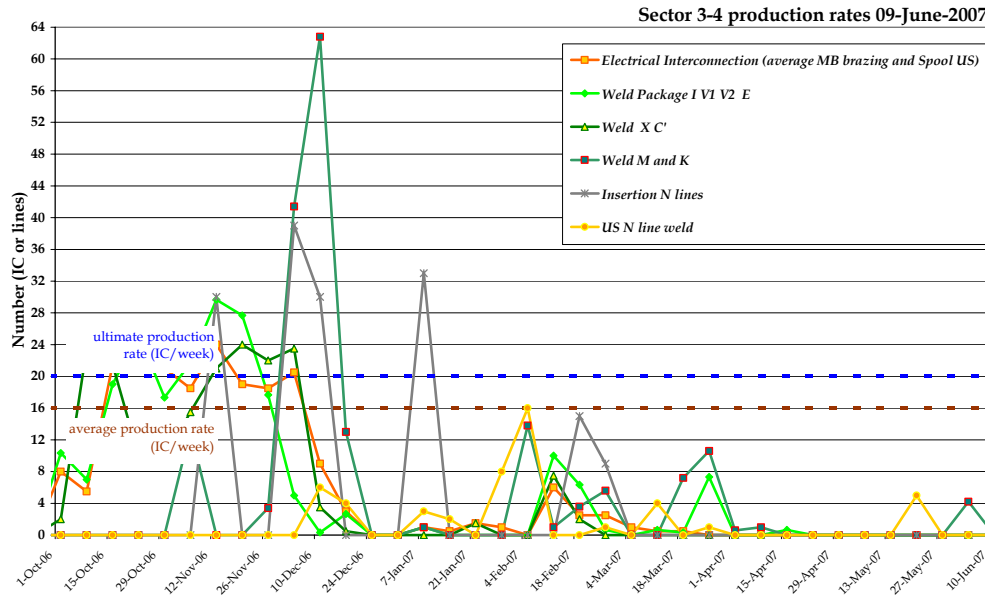


Fig. 7: Production rates in sector 3-4.

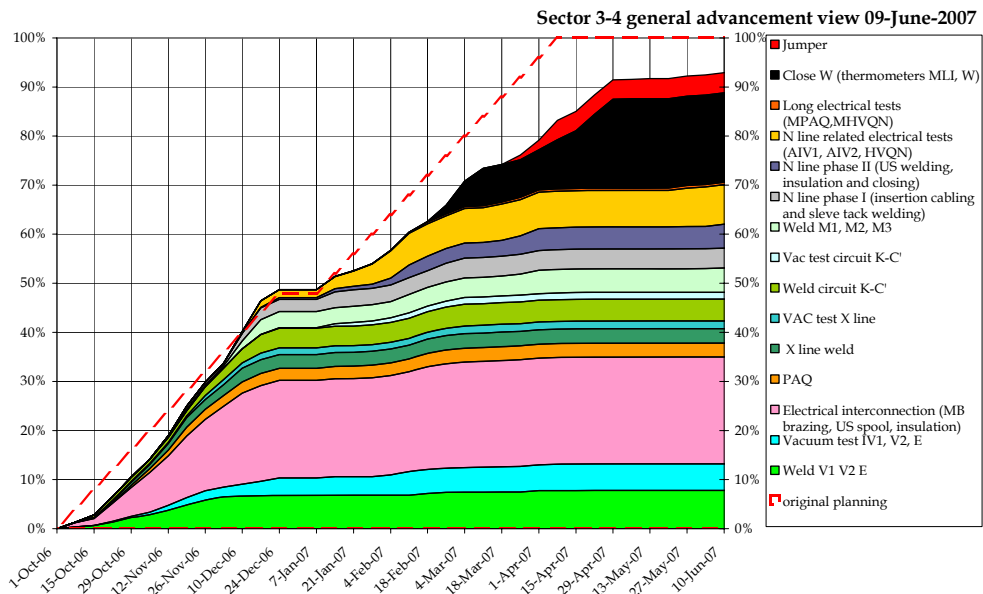


Fig. 8: General advancement view for sector 3-4.

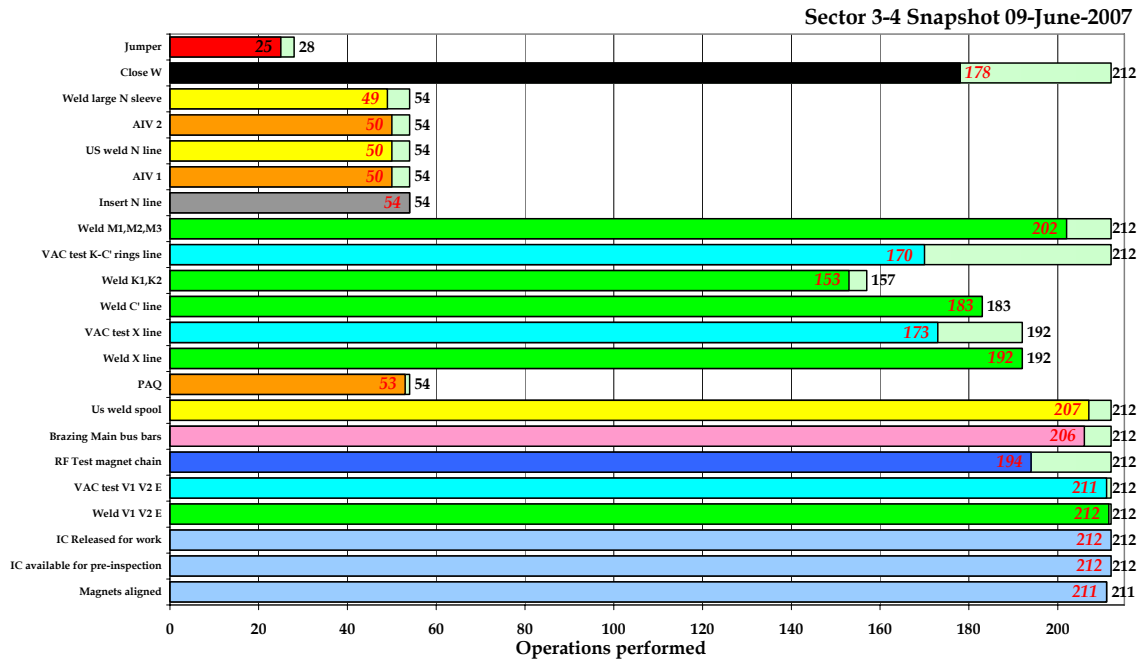


Fig. 9: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 4-5 (completed on 29-Apr-07)

- Flushing in progress, cool-down in preparation

Sector 5-6

- Pollution problem within V lines. Plug-in-modules of QBQI.33R5 were cut. Zone between QBQI.33R5 and QEDI.5L6 is clean and the IC's are being closed again. Zone between QBQI.33R5 and QDQI.7R5 is under investigation for contamination.
- 6 vacuum sectors provided to VAC.

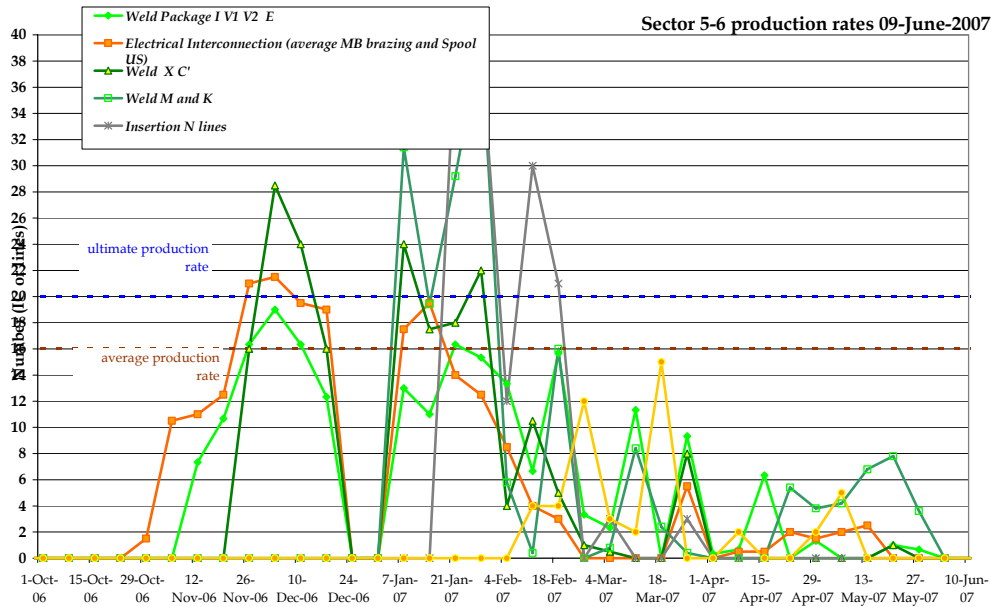


Fig. 10: Production rates in sector 5-6.

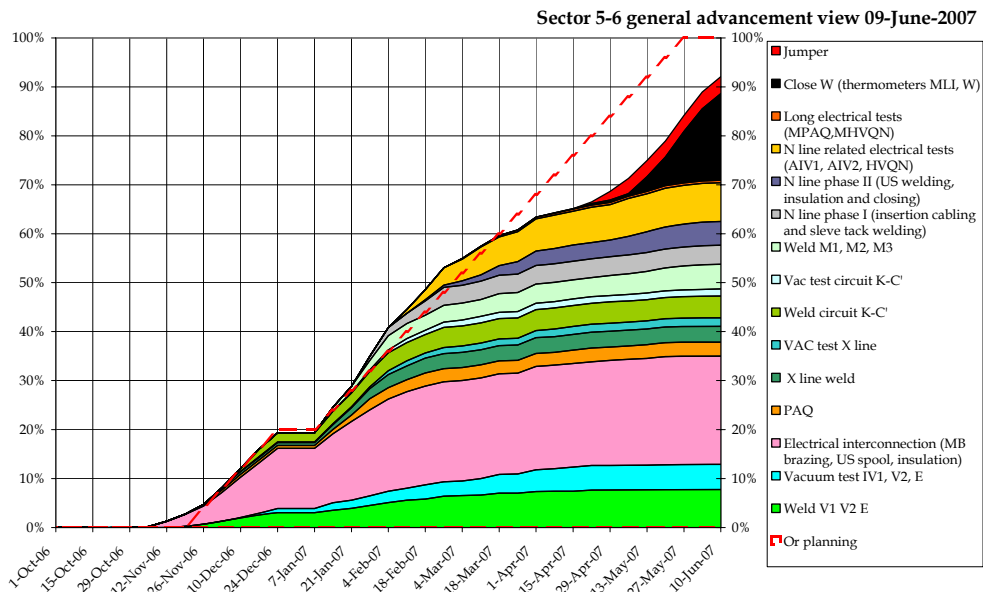


Fig. 11: General advancement view for sector 5-6.

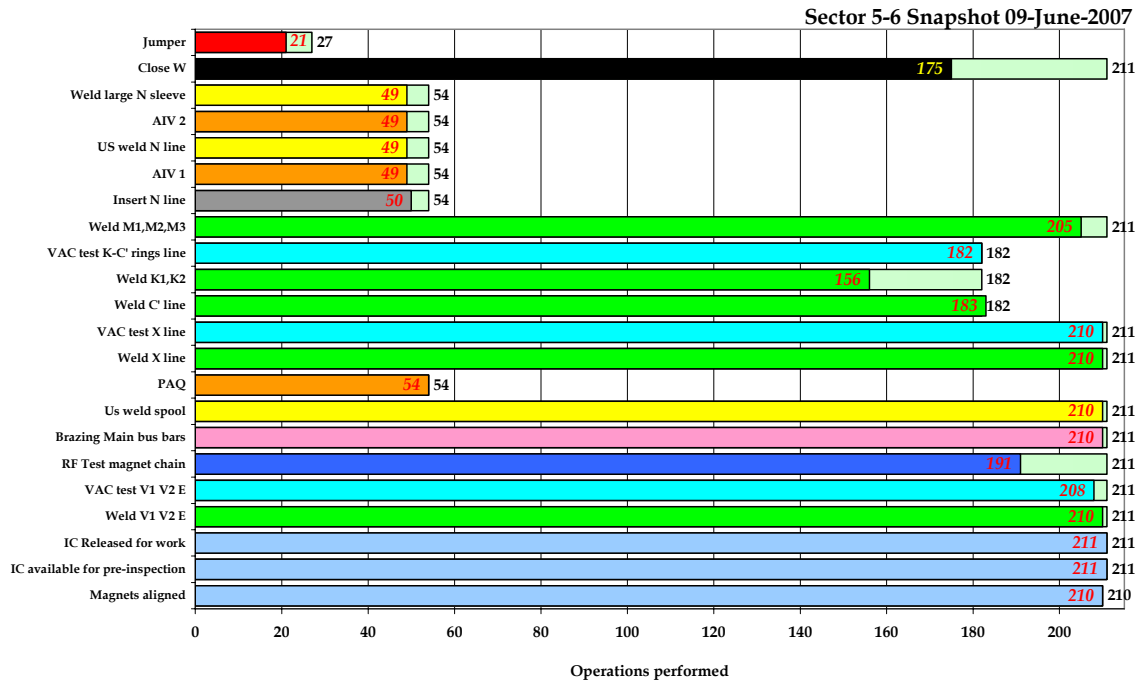


Fig. 12: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 6-7

- End of electrical tests HVQN and AIV1.
- Preparation of extended tests MPAC and MHVQN.
- Weld of Plug-in-modules restarted

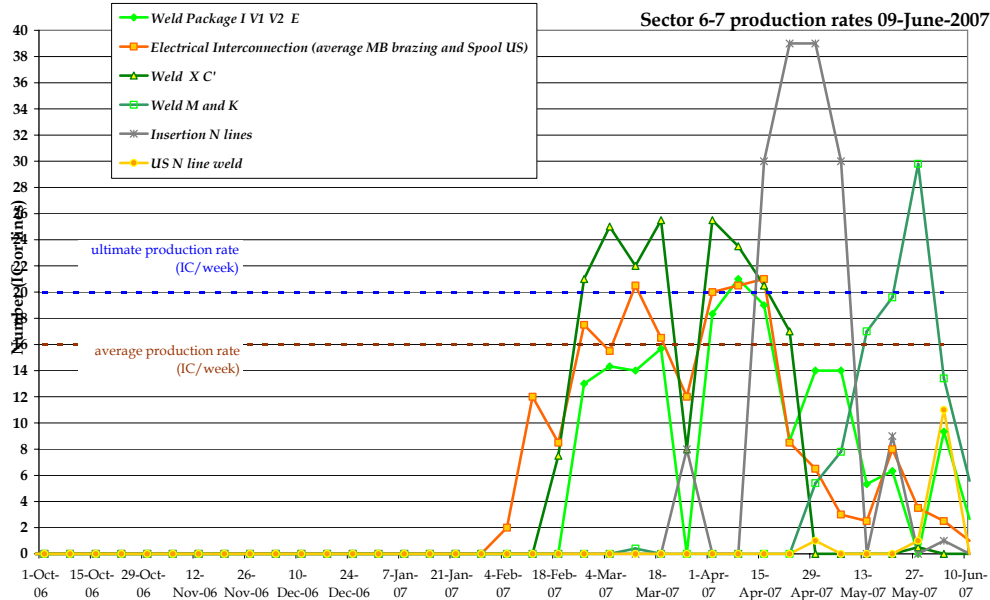


Fig. 13: Production rates in sector 6-7.

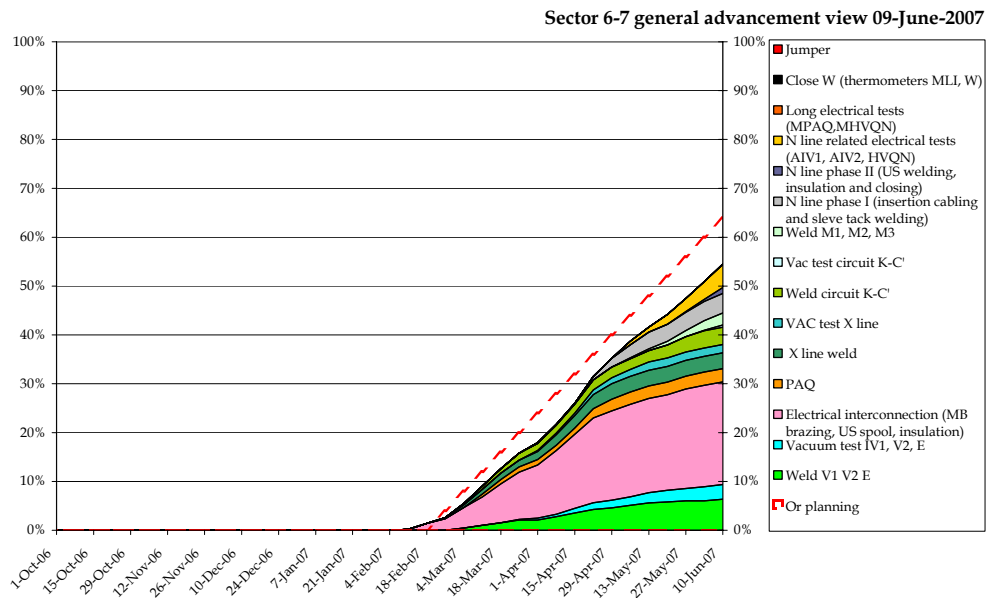


Fig. 14: General advancement view for sector 6-7.

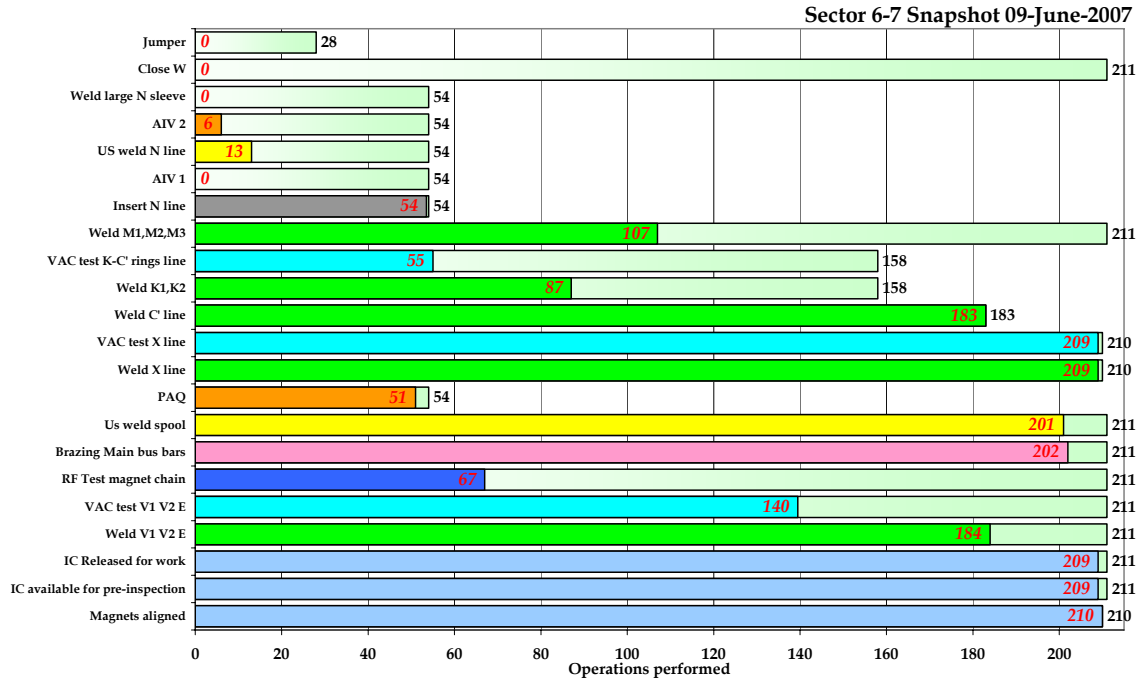


Fig. 15: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 8-1 (completed on 9-May-2007)

- Sector 15R8 is leaky. There is a leak of 5.10^{-4} mbarl/s. The pressure test will be launched with this leak. The repair of it will be carried out during the consolidation phase.

Vacuum Tests by Sector

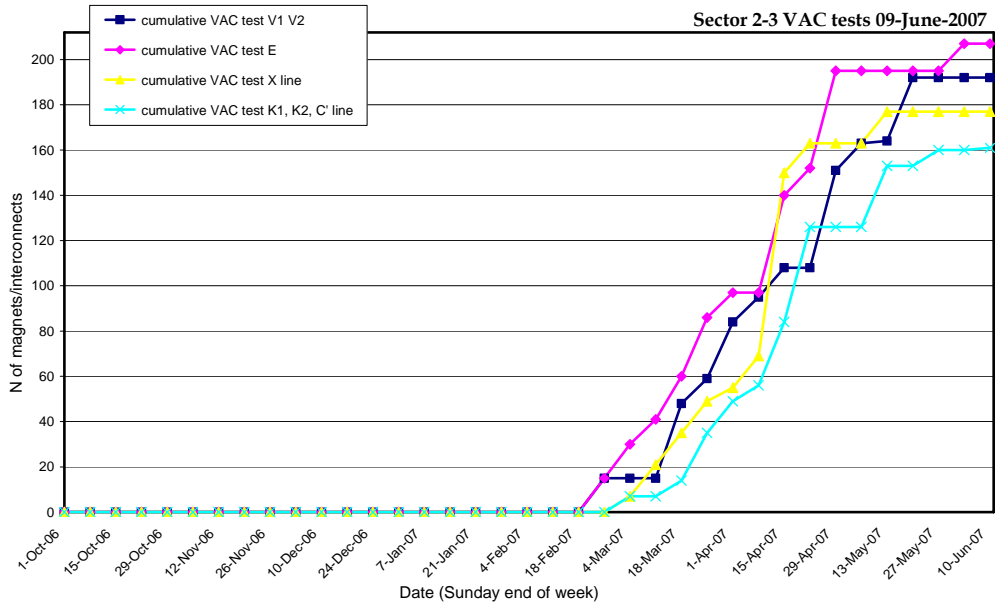


Fig. 16: Status of the VAC tests in sector 2-3.

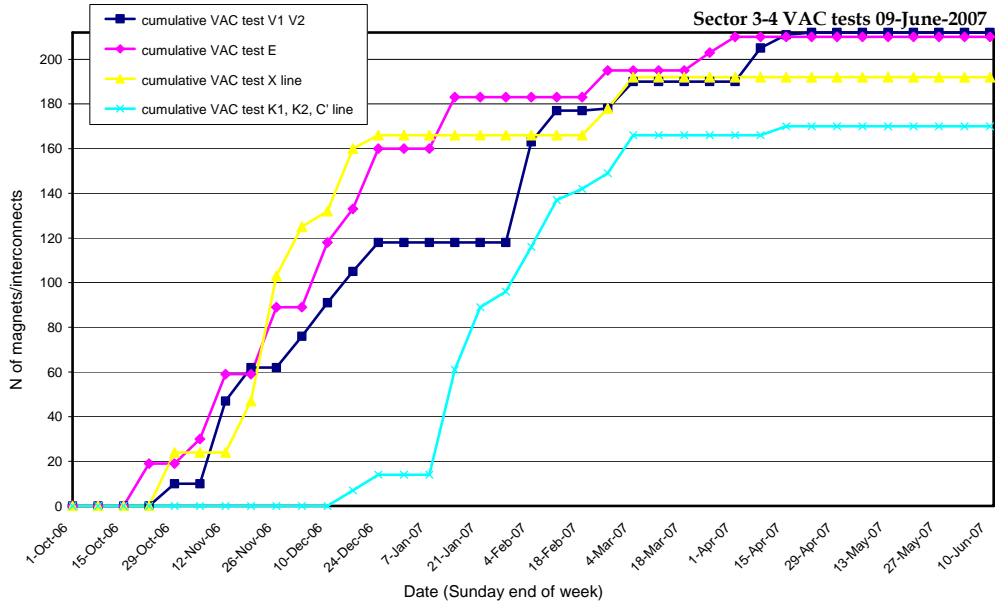


Fig. 17: Status of the VAC tests in sector 3-4.

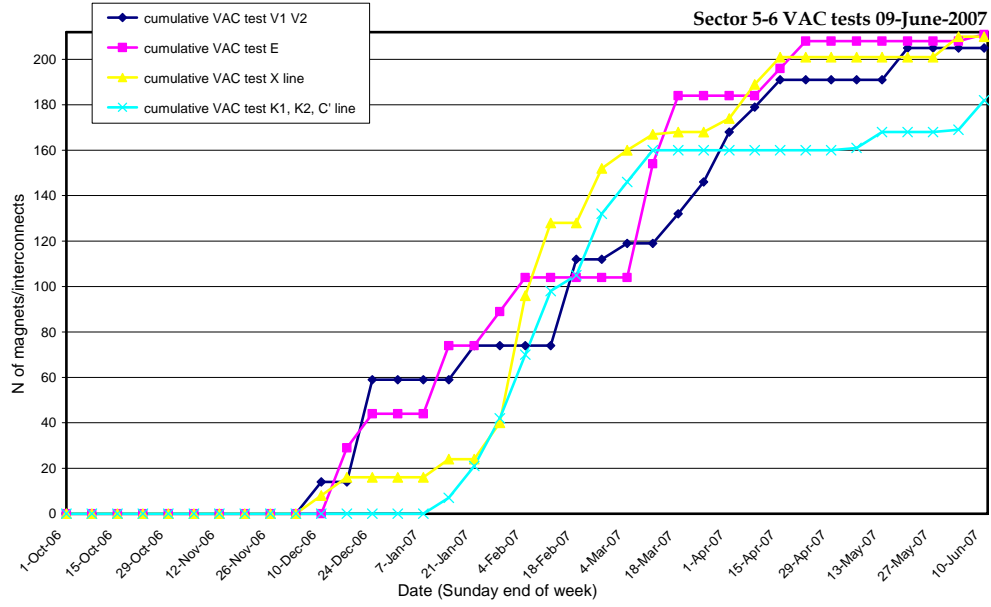


Fig. 18: Status of the VAC tests in sector 5-6.

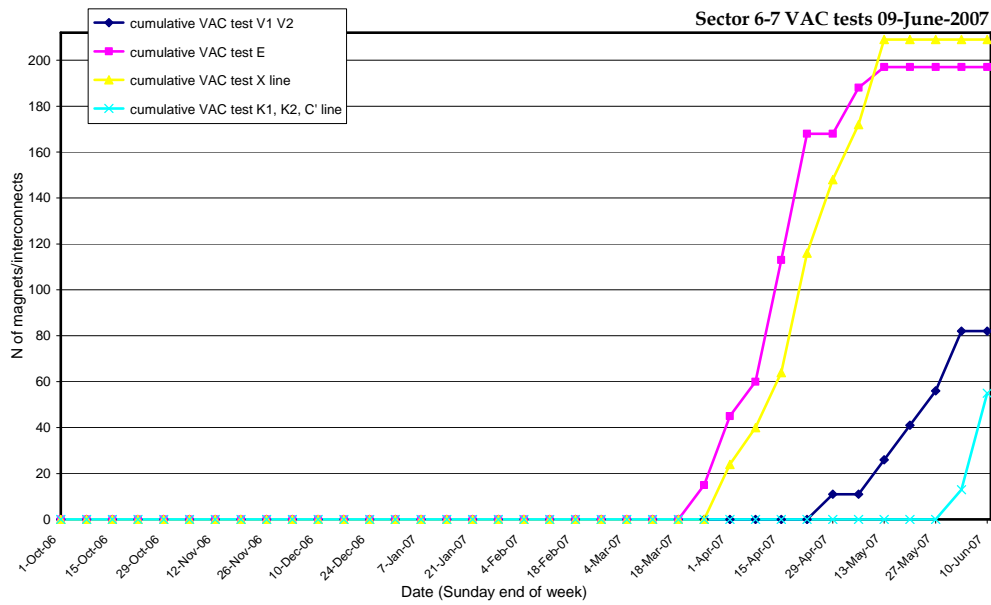


Fig. 19: Status of the VAC tests in sector 6-7.