

# Status of Interconnect Works in the LHC Arcs and DS regions – week 13 (March 26 – 31, 2007)

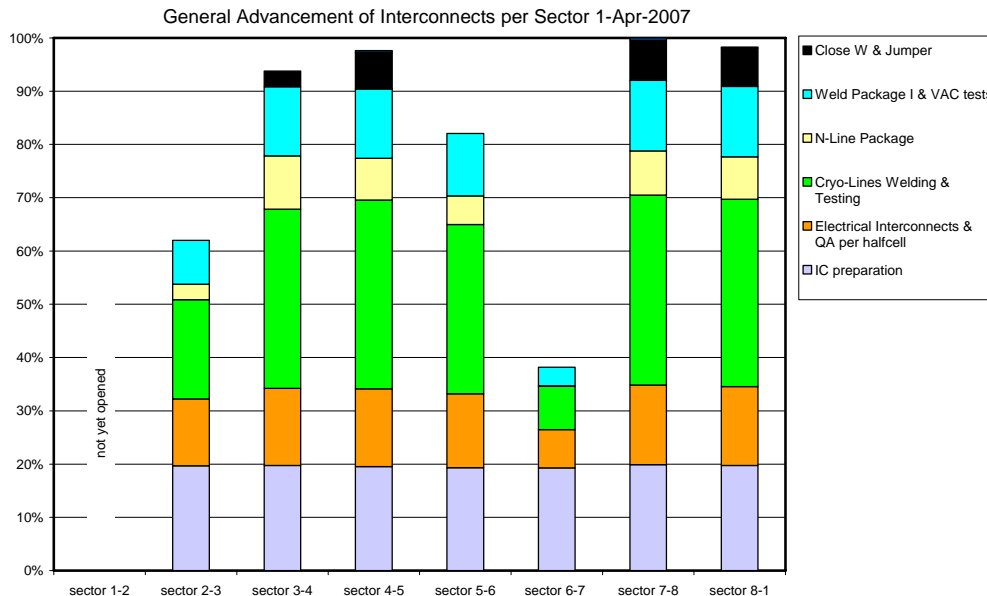
C. Vollinger, AT-MCS (on behalf of the arc coordination team)

EDMS no. 833654

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during week 13 (March 26 – 31, 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, 470 SSS, 110 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:**  
**F. Bertinelli, P. Fessia, A. Musso, M. Struik, C. Vollinger**

<i>Sectors</i>	<i>Started</i>
1-2	No
7-8	finished
2-3 3-4 4-5 5-6 6-7 8-1	Yes

**Sector 1-2: not yet started.**

**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 2-3

- All brazing of spools is planned to be finished next week (would allow the teams to start in sector 1-2).

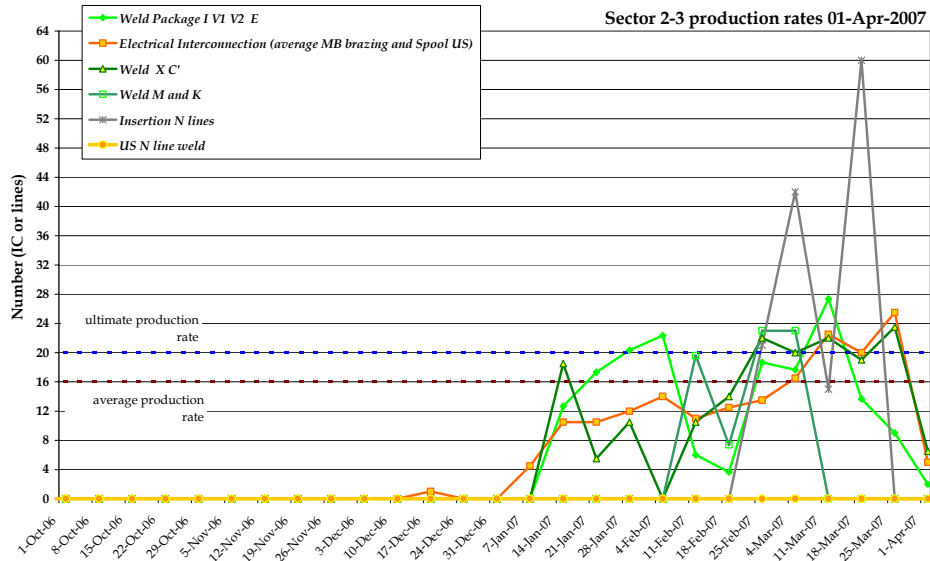


Fig. 1: Production rates in sector 2-3.

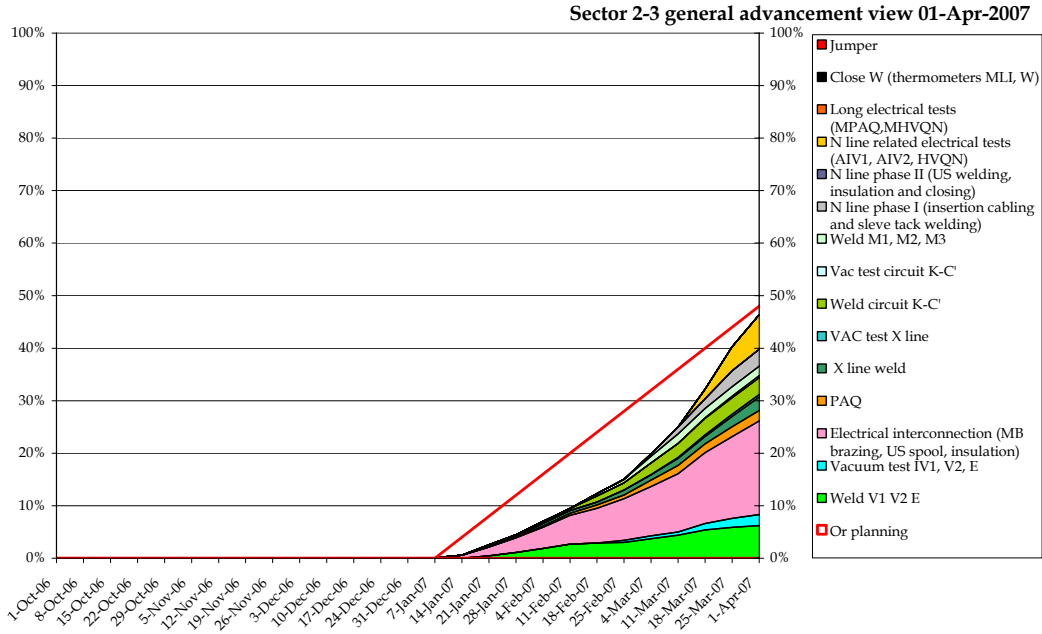


Fig. 2: General advancement view for sector 2-3.

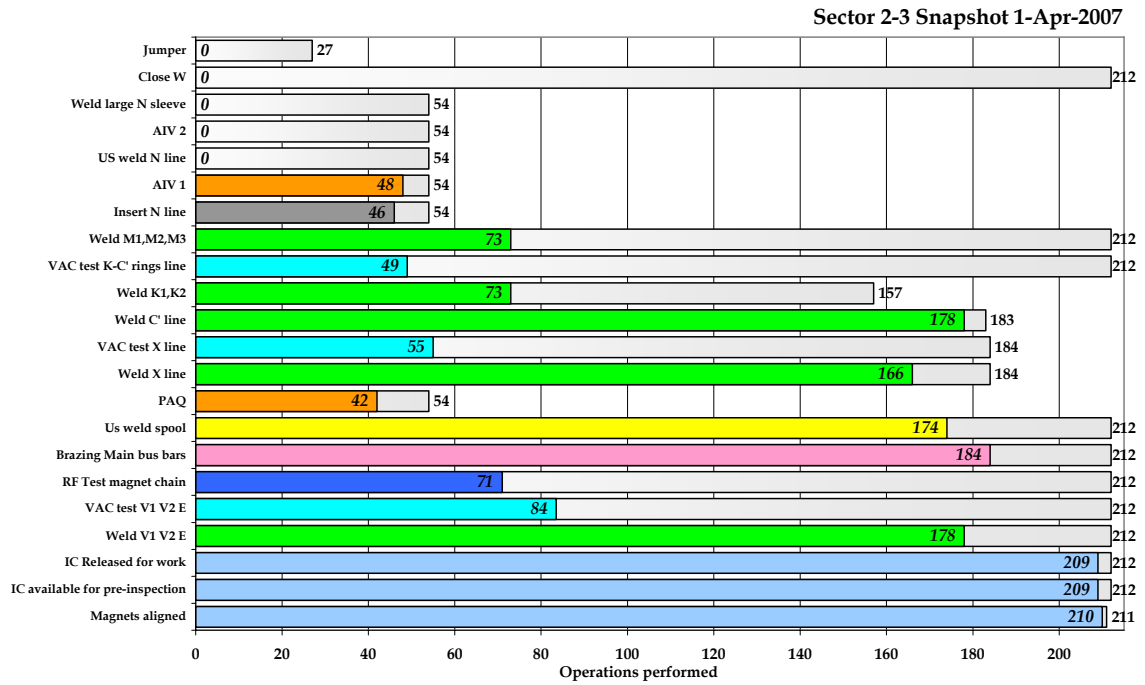


Fig. 3: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

## Sector 3-4

- E line completed, work on jumpers re-started,
- Pumping and testing of V-chain (from DFBA to DFBA) ongoing,
- Closure of 1<sup>st</sup> Vac sector planned for next week.

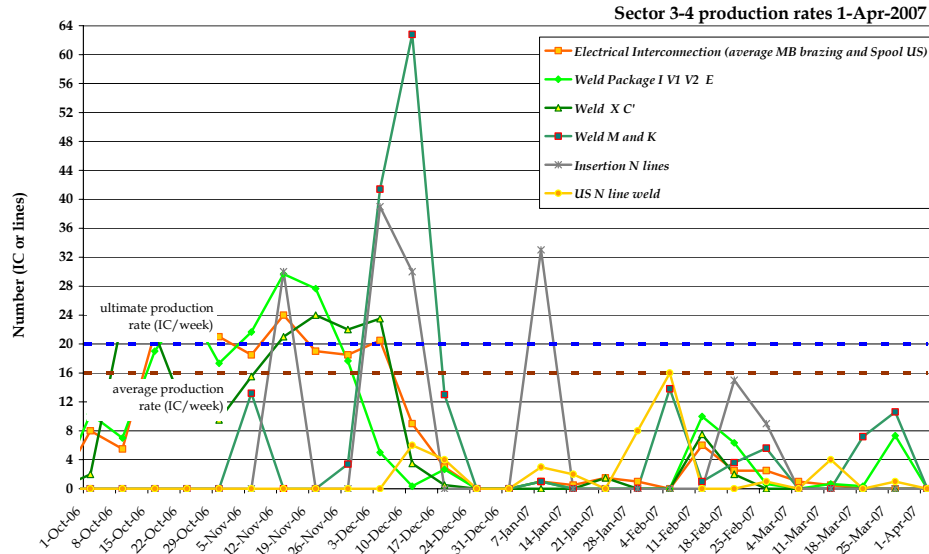


Fig. 4: Production rates in sector 3-4.

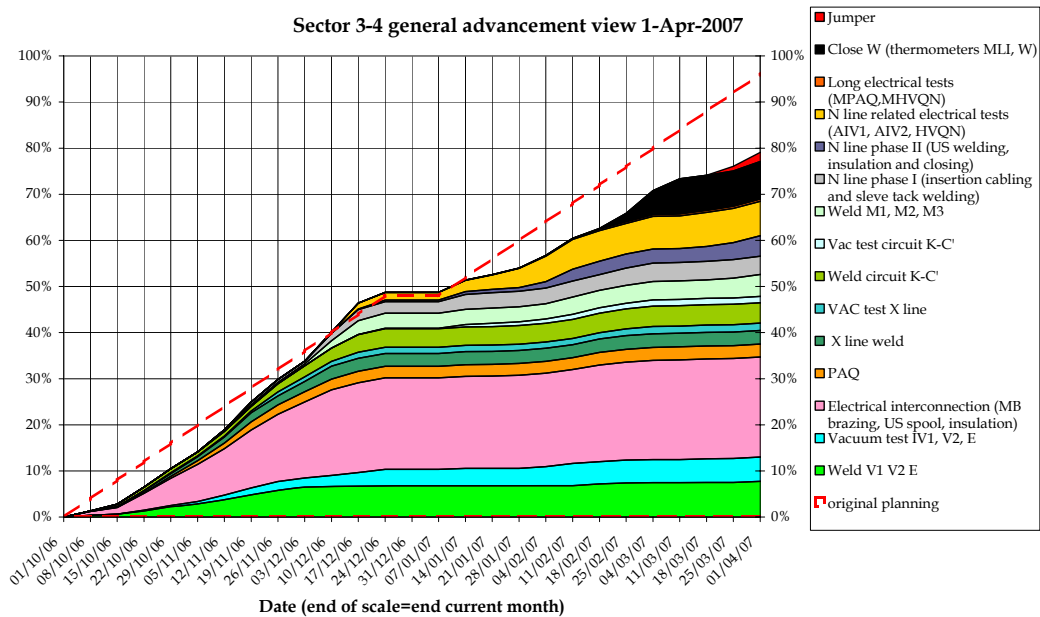


Fig. 5: General advancement view for sector 3-4.

Sector 3-4 Snapshot 1-Apr-2007

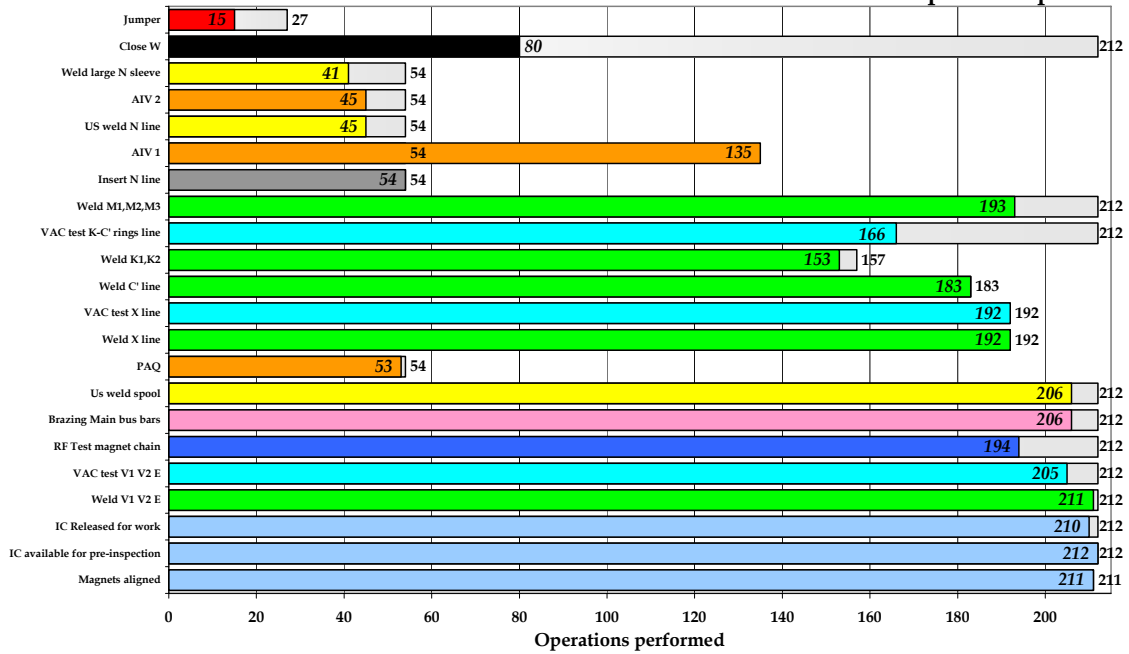


Fig. 6: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

## Sector 4-5

- All jumpers finished, repair of Q11 in R4 started,
- VAC accomplished 10 sectors (out of 12) leak tight.

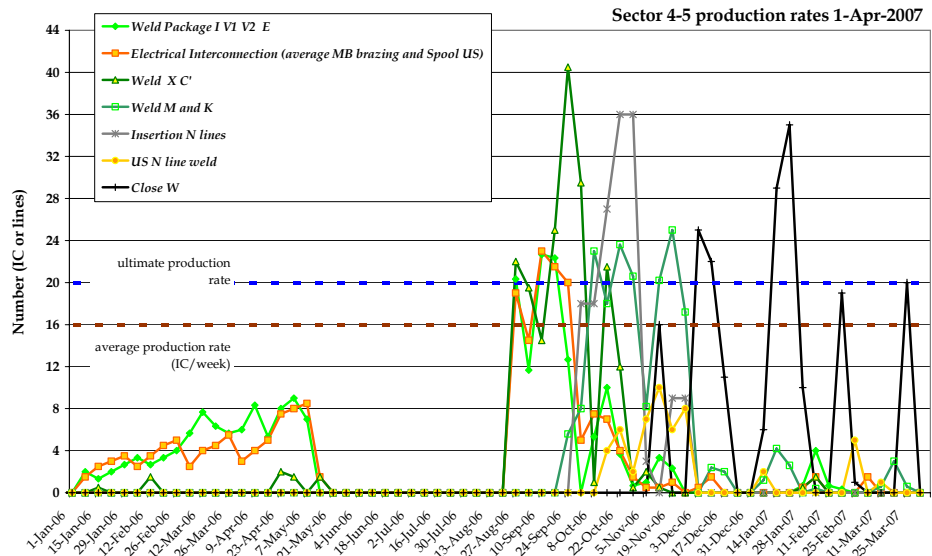


Fig. 7: Production rates in sector 4-5.

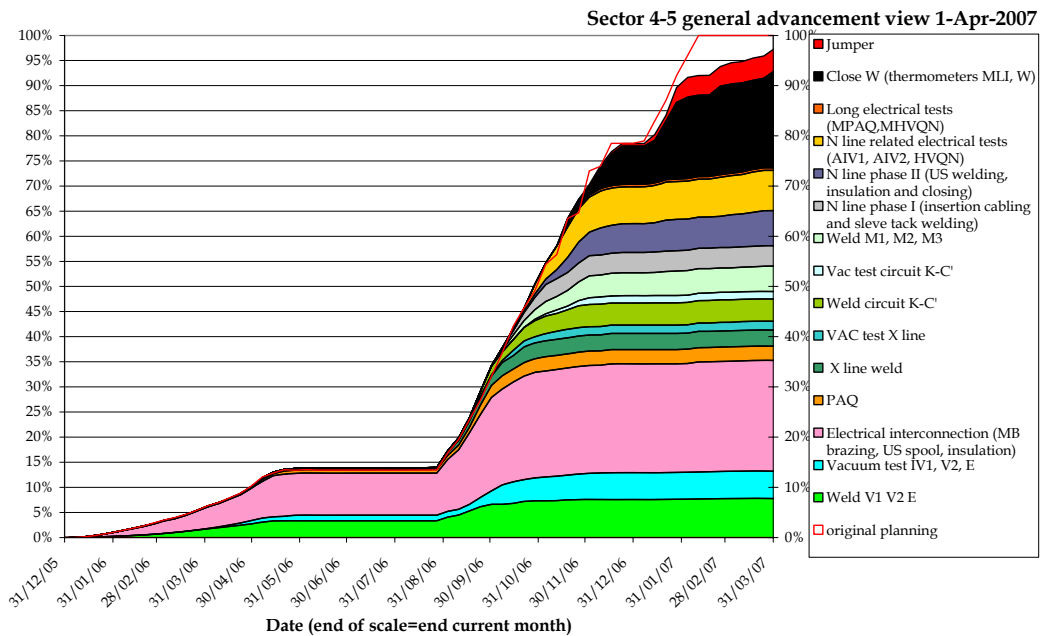


Fig. 8: General advancement view for sector 4-5.

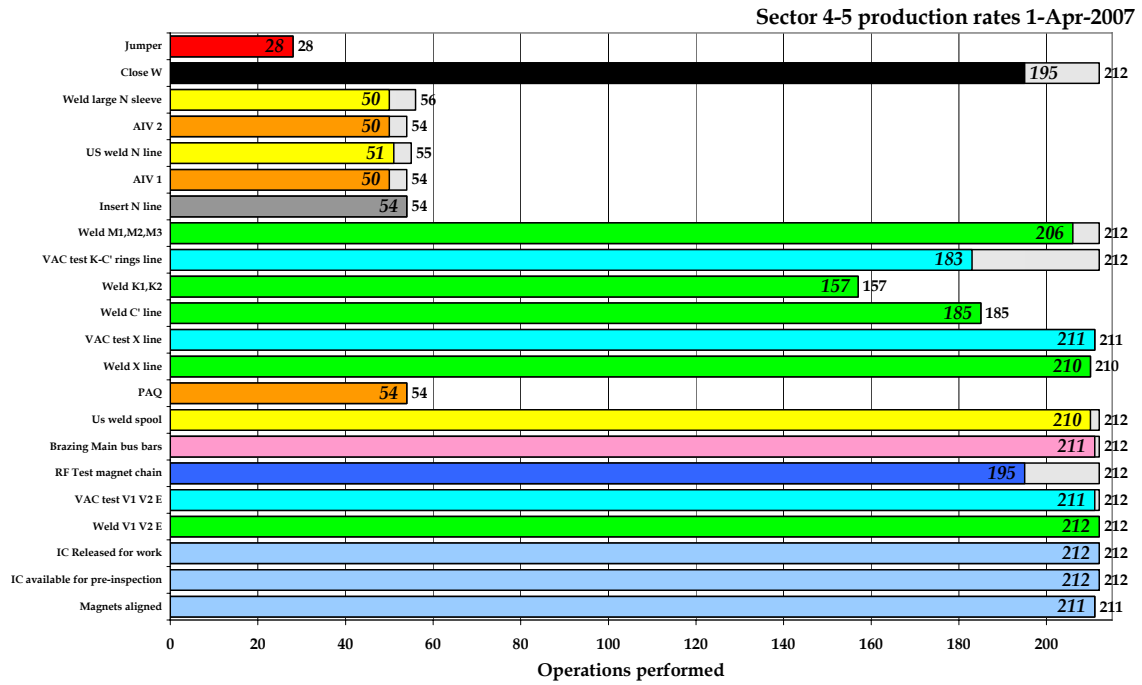


Fig. 9: Snapshot of work progress in sector 4-5 showing the number of operations achieved in total with respect to the total number of operations necessary.



## Sector 5-6

- Production of interconnects within the original planning.

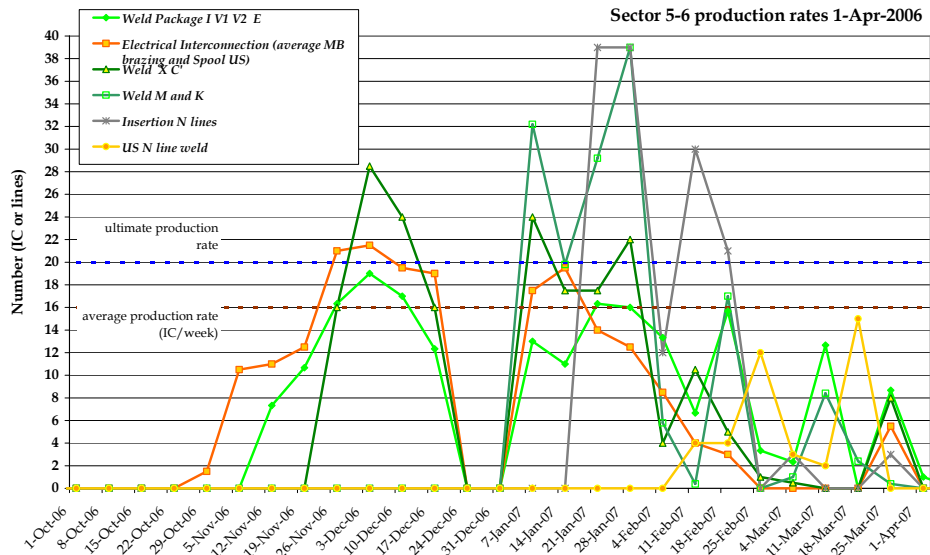


Fig. 10: Production rates in sector 5-6.

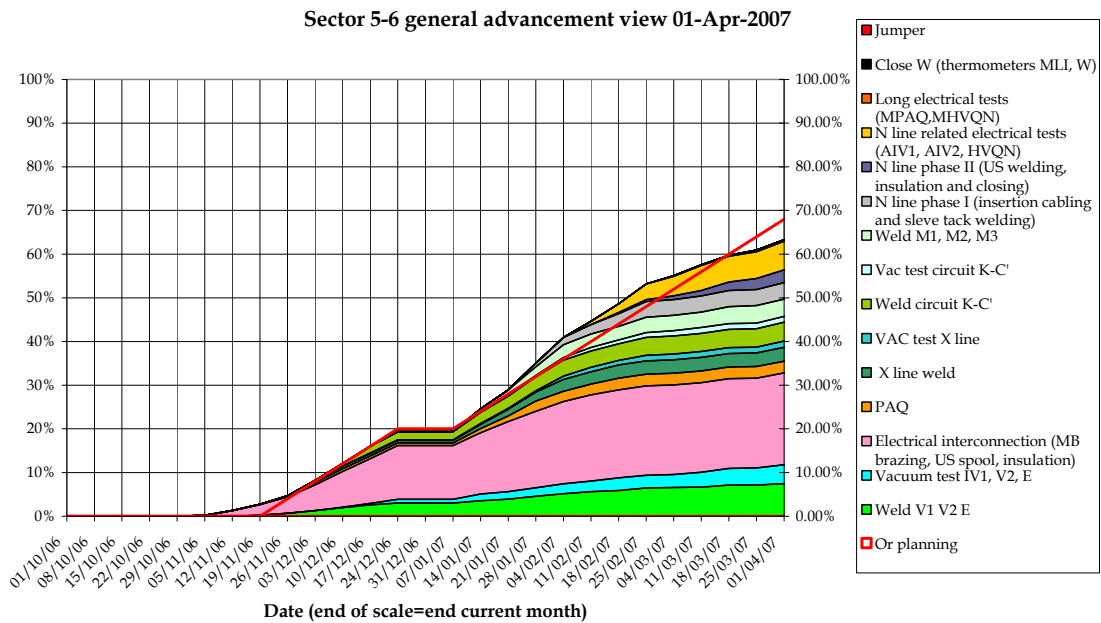


Fig. 11: General advancement view for sector 5-6.

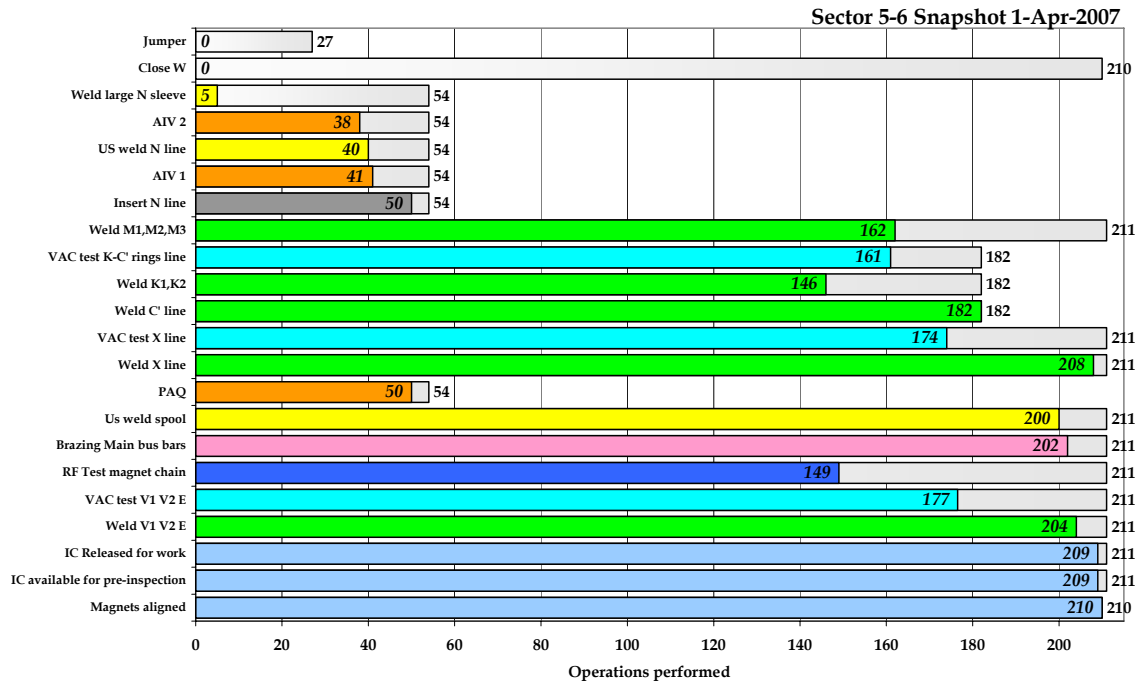


Fig. 12: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

## Sector 6-7

- Insertion of N line started.

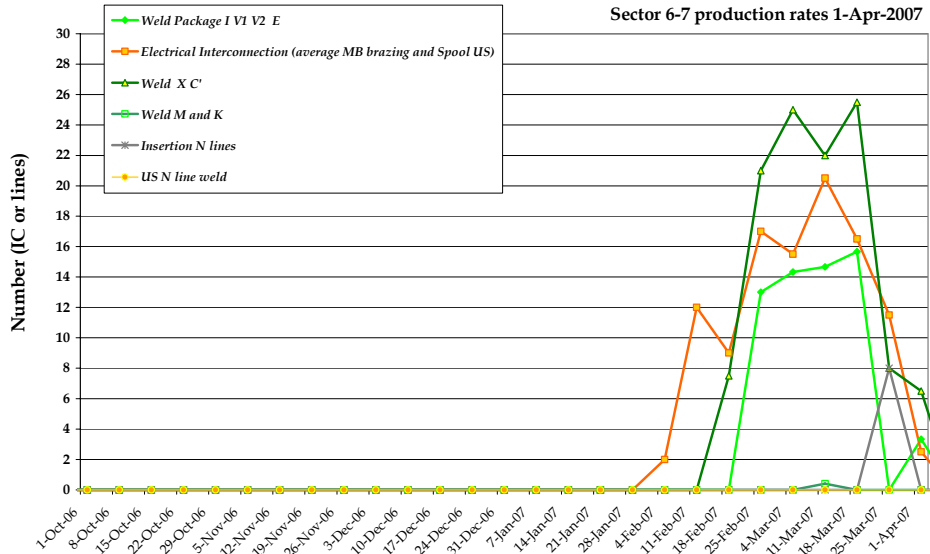


Fig. 13: Production rates in sector 6-7.

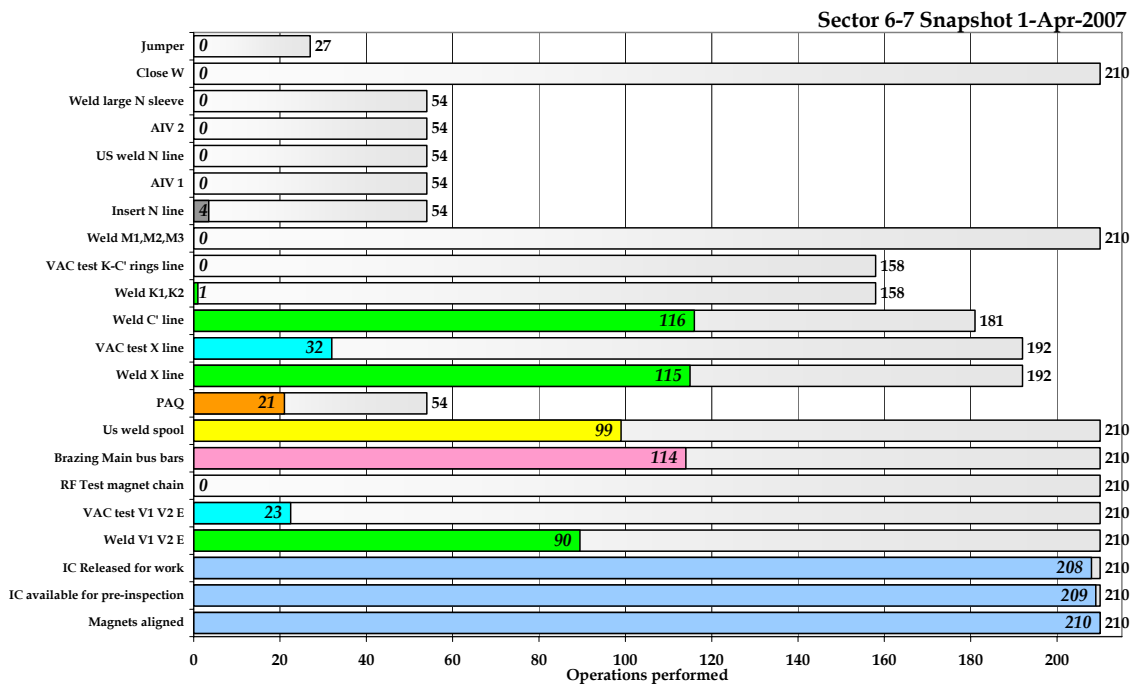


Fig. 14: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

## Sector 8-1

- Electrical tests in DS-L1 finished,

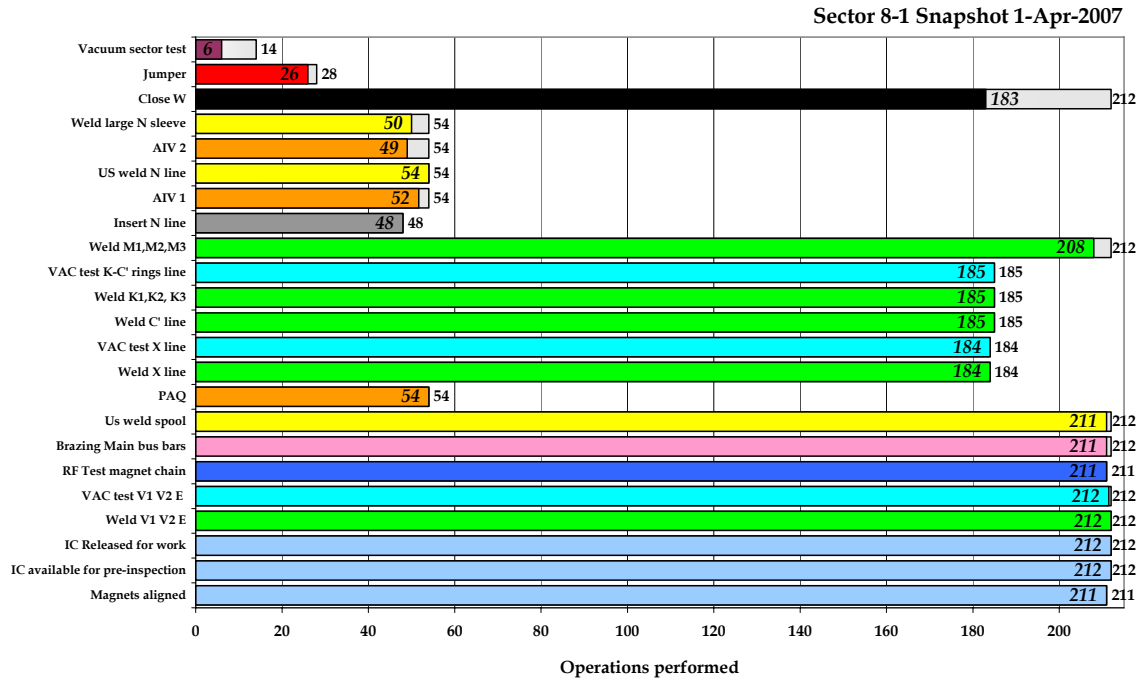


Fig. 15: Snapshot of work progress in sector 8-1 showing the number of operations achieved in total with respect to the total number of operations needed.

# Vacuum Tests by Sector

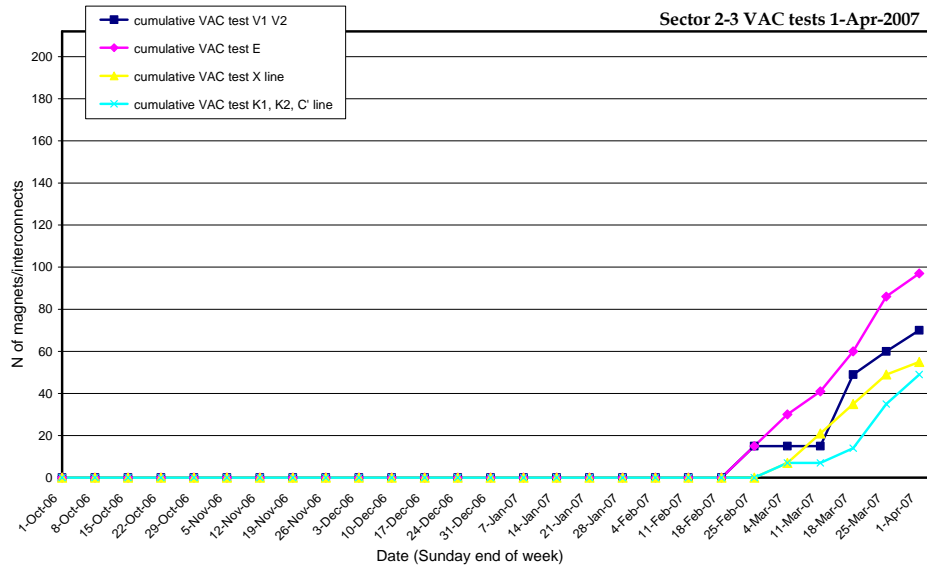


Fig. 16: Status of the VAC tests in sector 2-3.

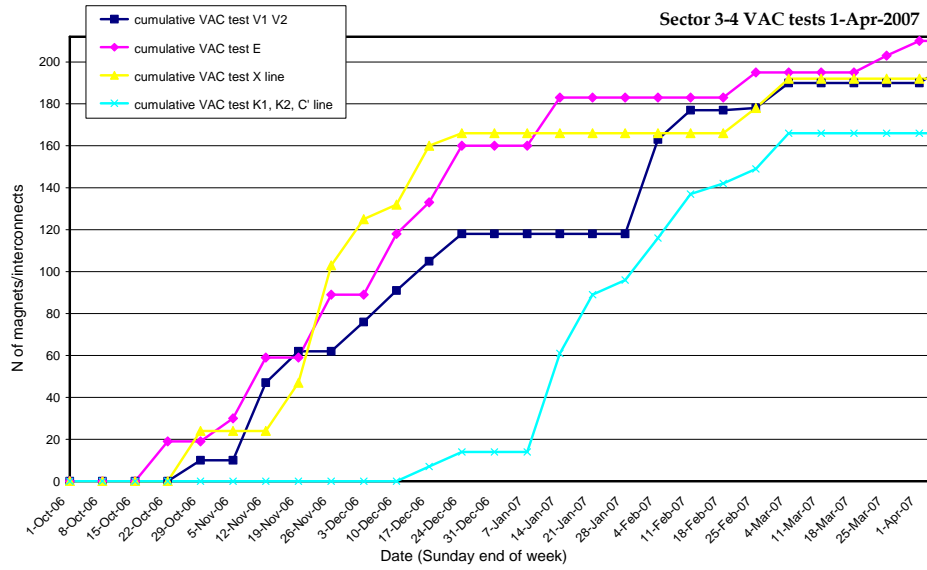


Fig. 17: Status of the VAC tests in sector 3-4.

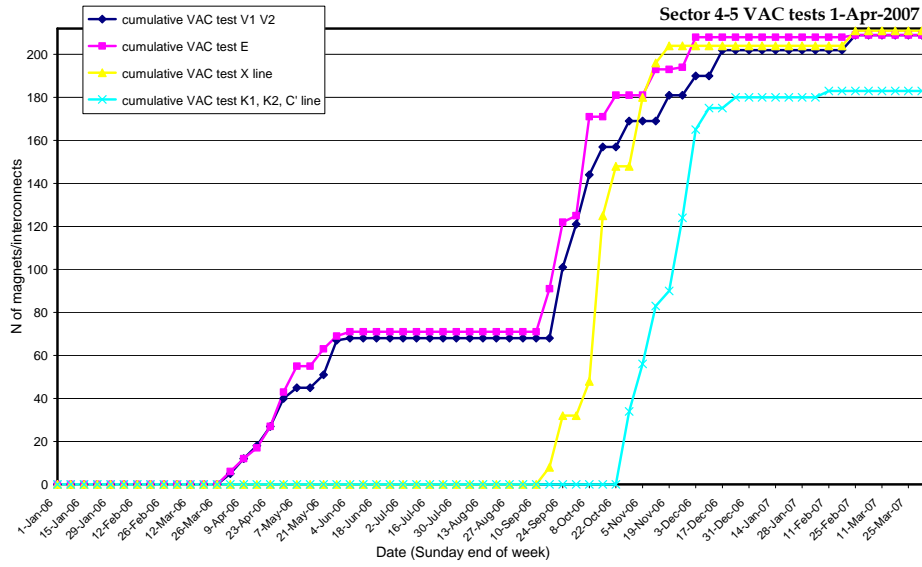


Fig. 18: Status of the VAC tests in sector 4-5.

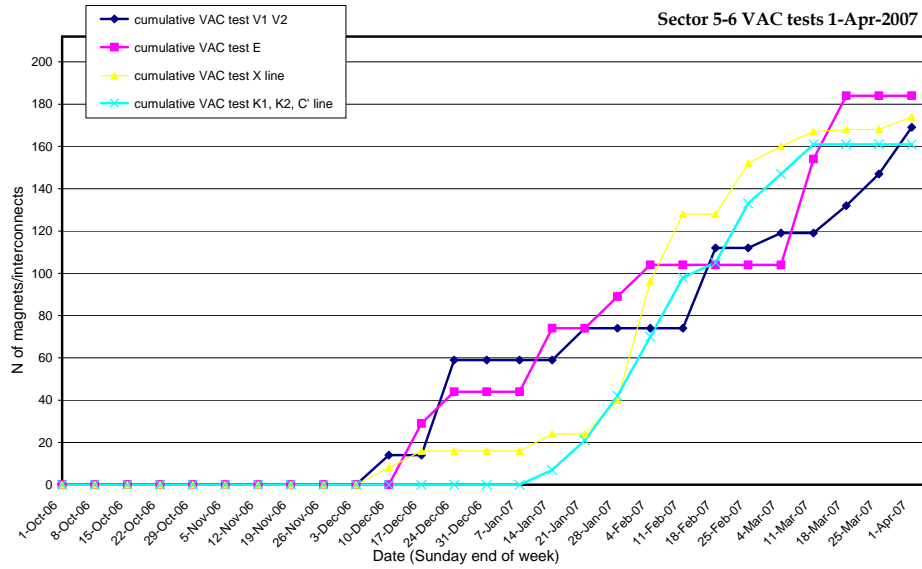


Fig. 19: Status of the VAC tests in sector 5-6.