

# Status of Interconnect Works in the LHC Arcs and DS regions – week 24 (June 11 – June 16, 2007)

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

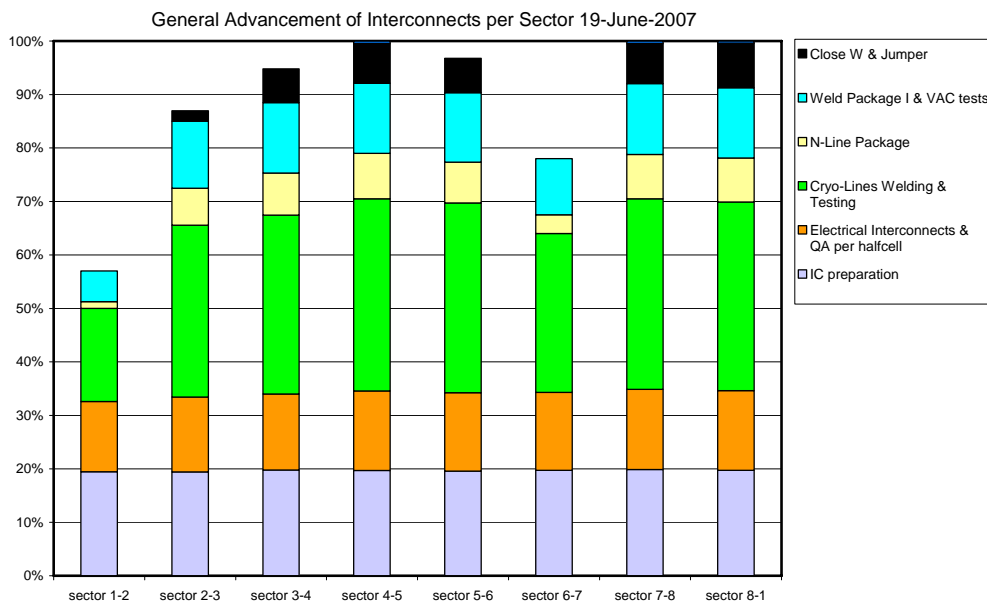
EDMS no. 850949

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during week 24 (June 11 – June 16, 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: 1232 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.

**Sector coordination team:**  
**F. Bertinelli, P. Fessia, A. Musso, M. Struik, C. Vollinger**

<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.

**General news :**

- SSS500 repair (except 7-8) completed.
- Availability of last Plug-in-modules now expected for the end of August 07. This will cause delay of Interconnection works.

## Sector 1-2

- Insertion of N lines in 1R completed.
- Weld of Plug-in-modules ongoing.

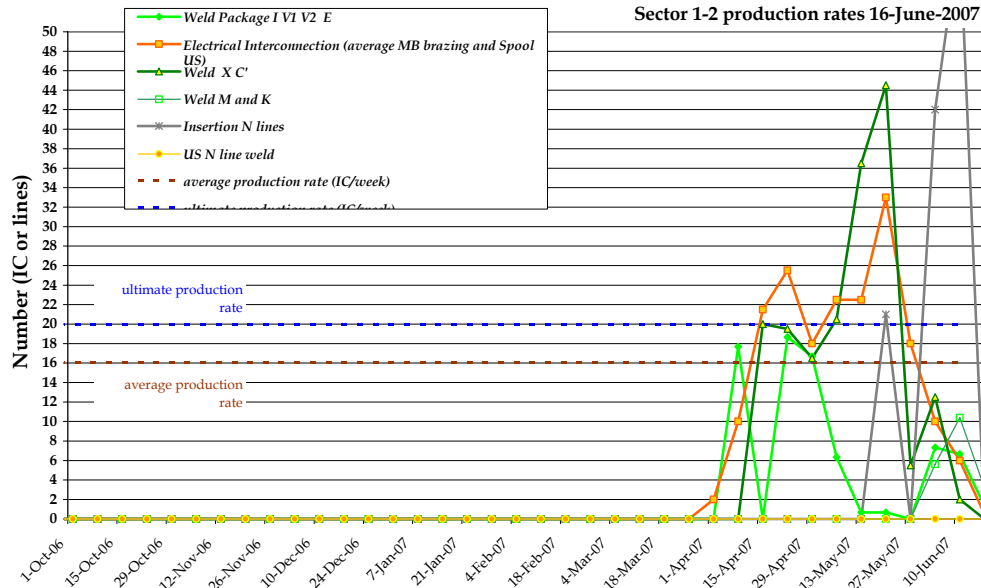


Fig. 1: Production rates in sector 1-2.

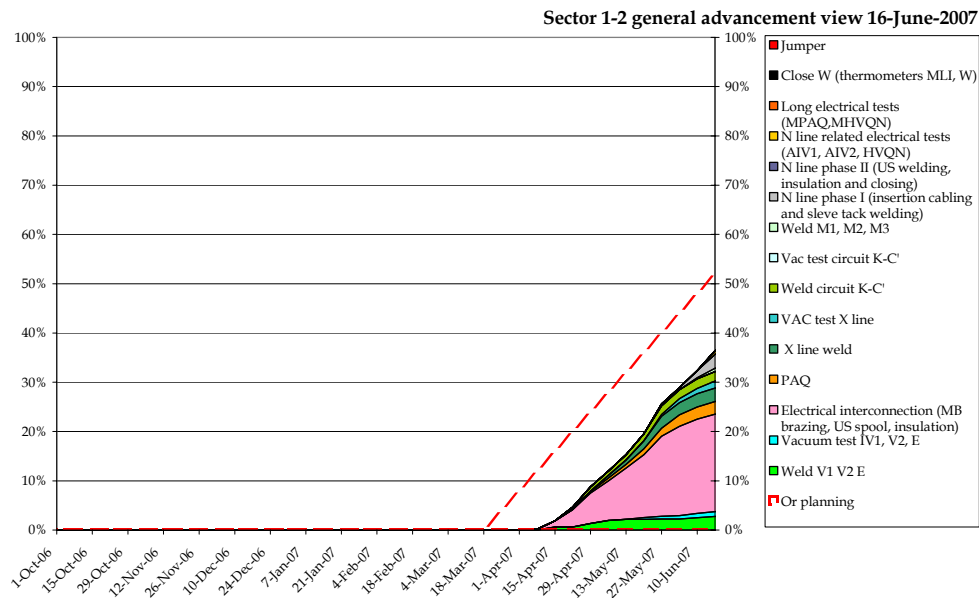


Fig. 2: General advancement view for sector 1-2.

Sector 1-2 Snapshot 16-June-2007

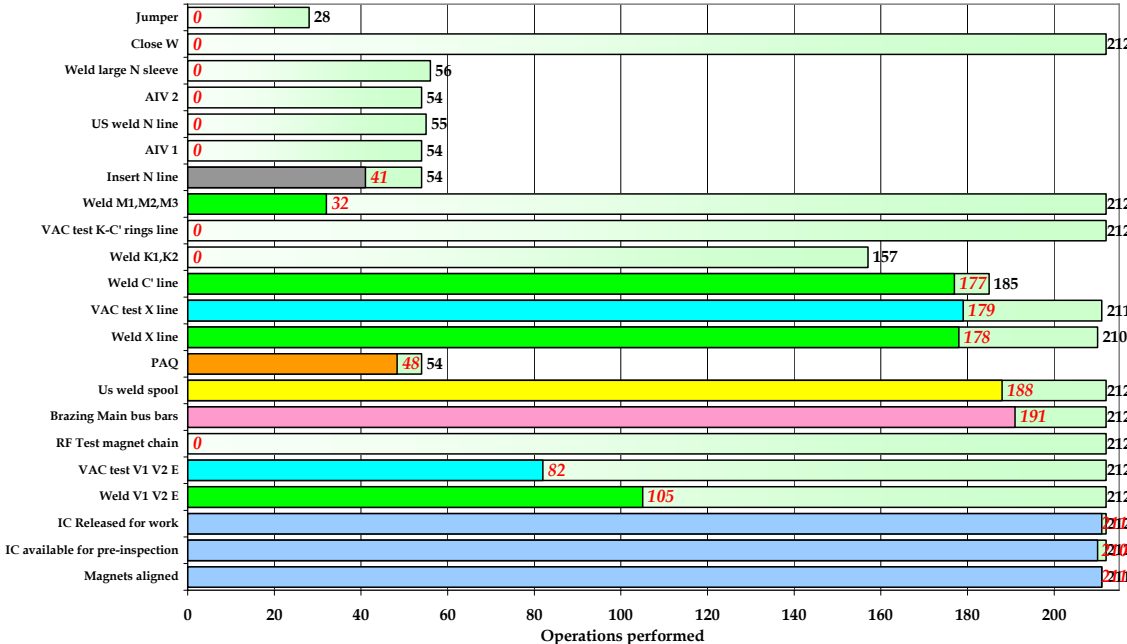


Fig. 3: Snapshot of work progress in sector 1-2 showing the number of operations achieved in total with respect to the total number of operations necessary.

## Sector 2-3

- Closure of W bellow ongoing.

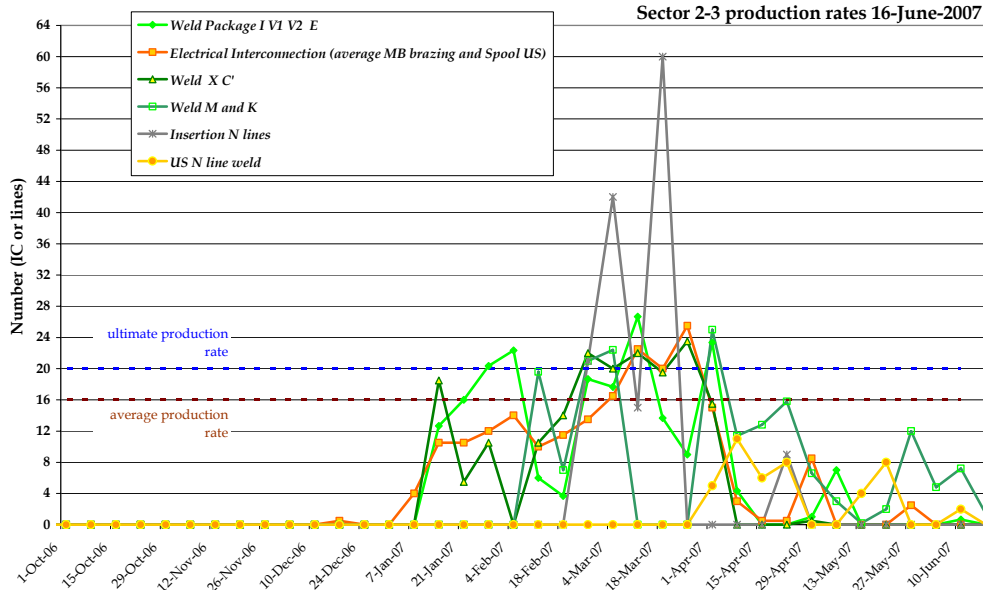


Fig. 4: Production rates in sector 2-3.

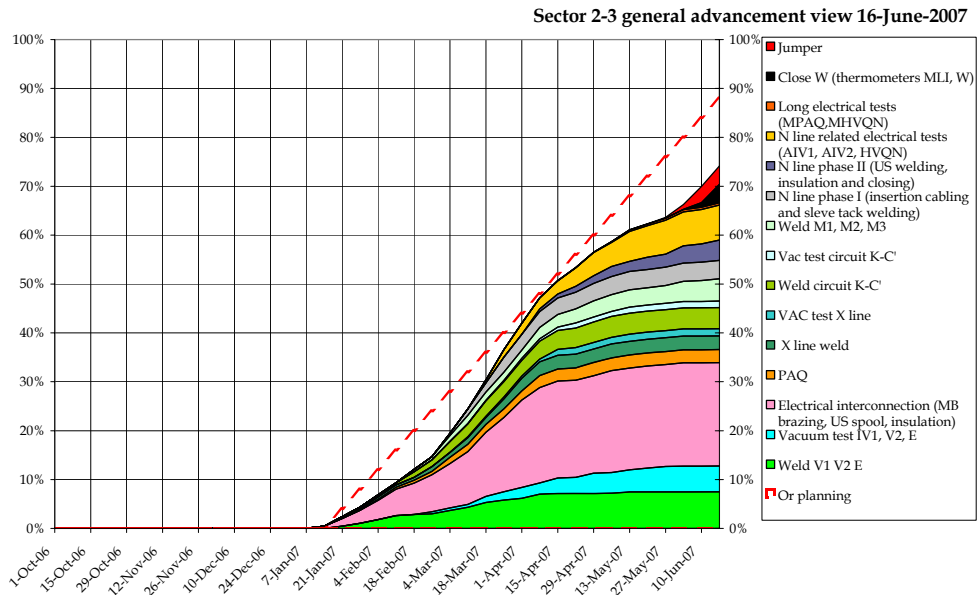


Fig. 5: General advancement view for sector 2-3.

Sector 2-3 Snapshot 16-June-2007

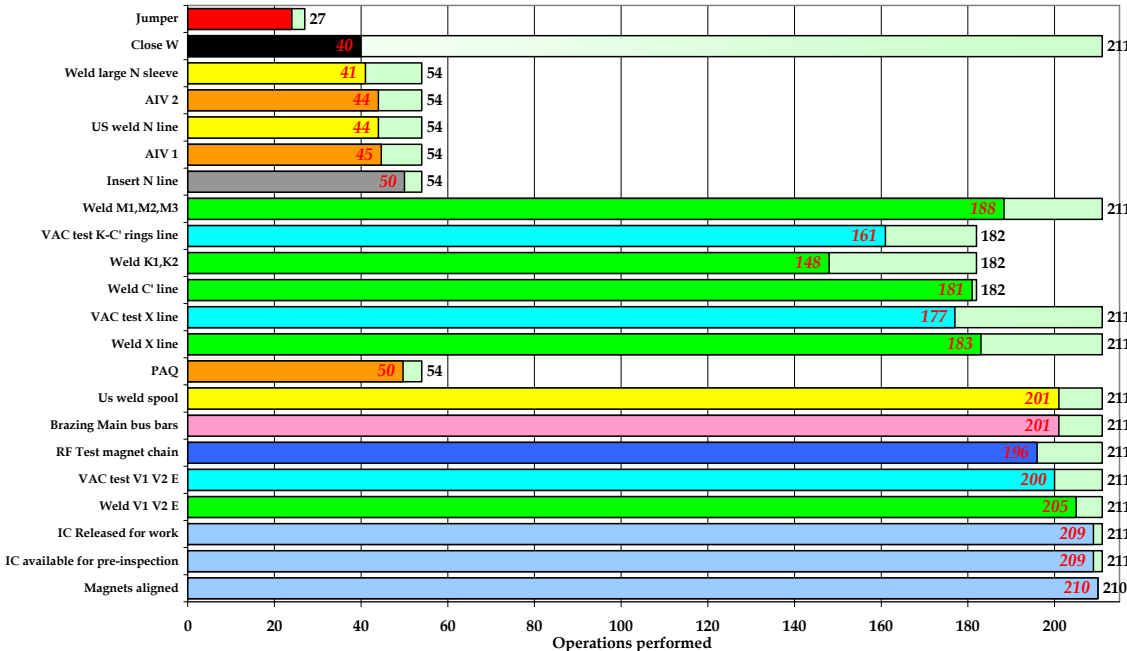


Fig. 6: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

### Sector 3-4

- Within the 3 leaky sectors, 2 leaks have been identified and are being repaired. The third one needs to have all jumpers closed.

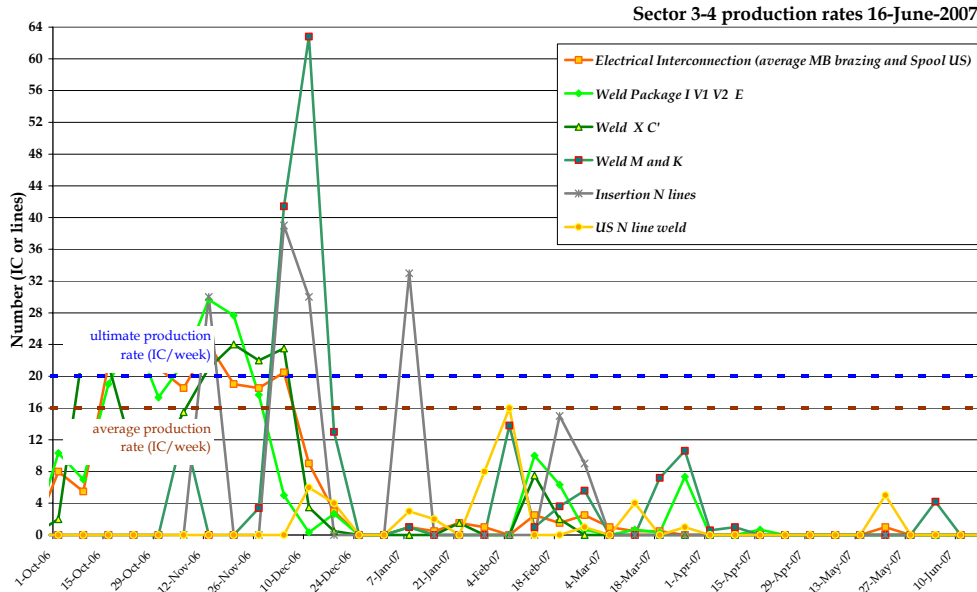


Fig. 7: Production rates in sector 3-4.

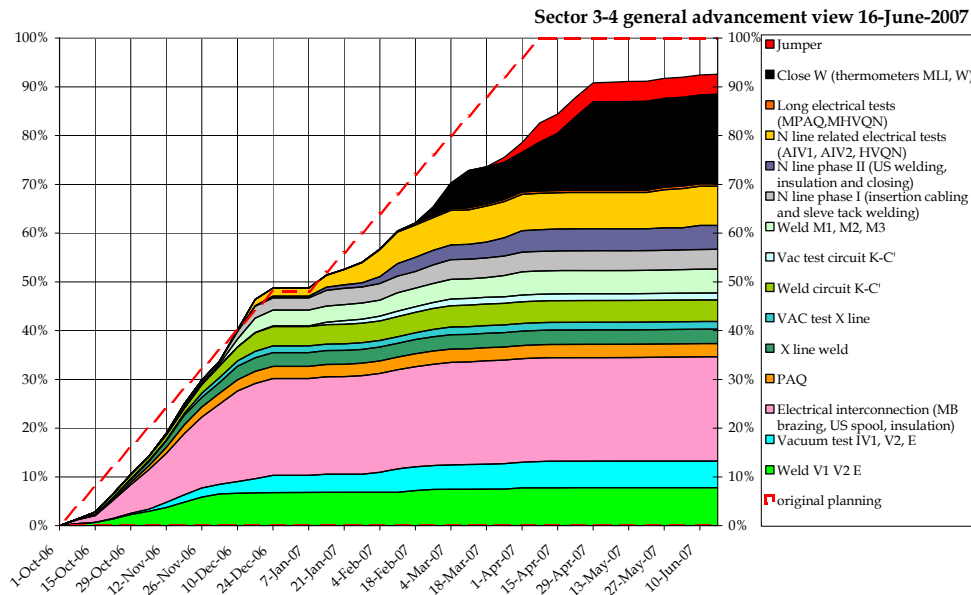


Fig. 8: General advancement view for sector 3-4.

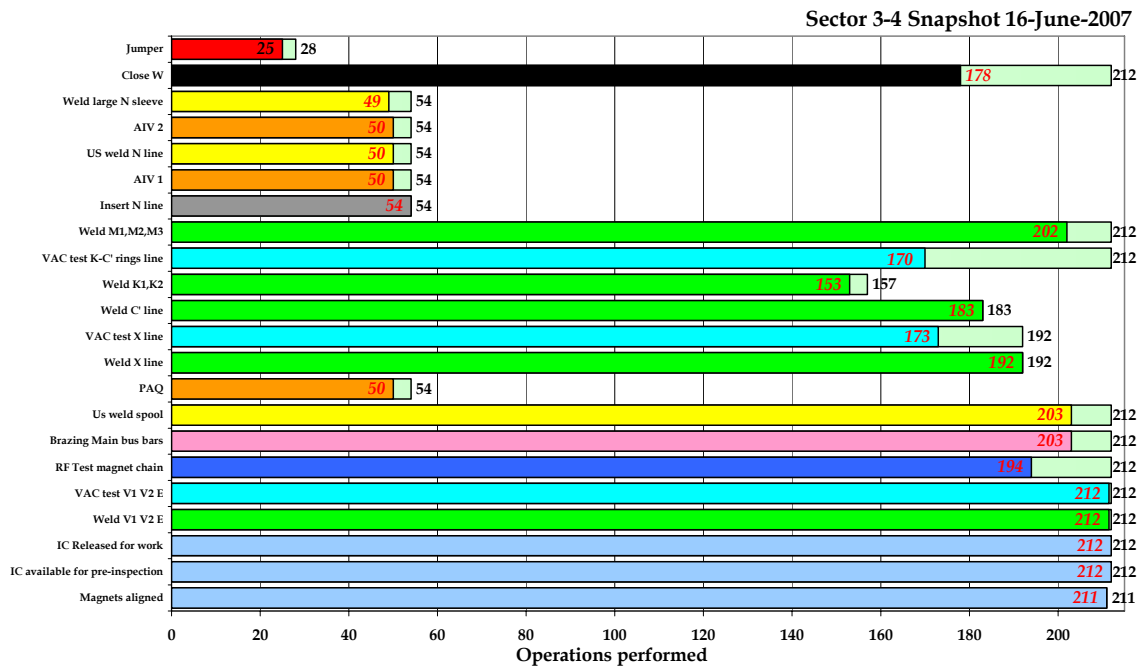


Fig. 9: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

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

- Flushing in progress, cool-down in preparation



## Sector 5-6

- Pollution problem within V lines solved.
- All jumpers are closed.

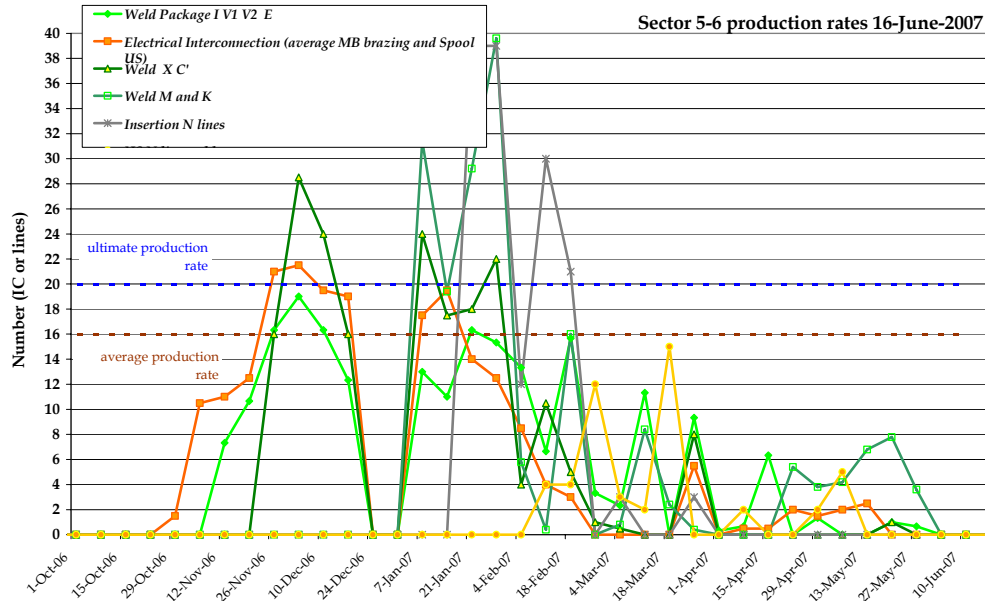


Fig. 10: Production rates in sector 5-6.

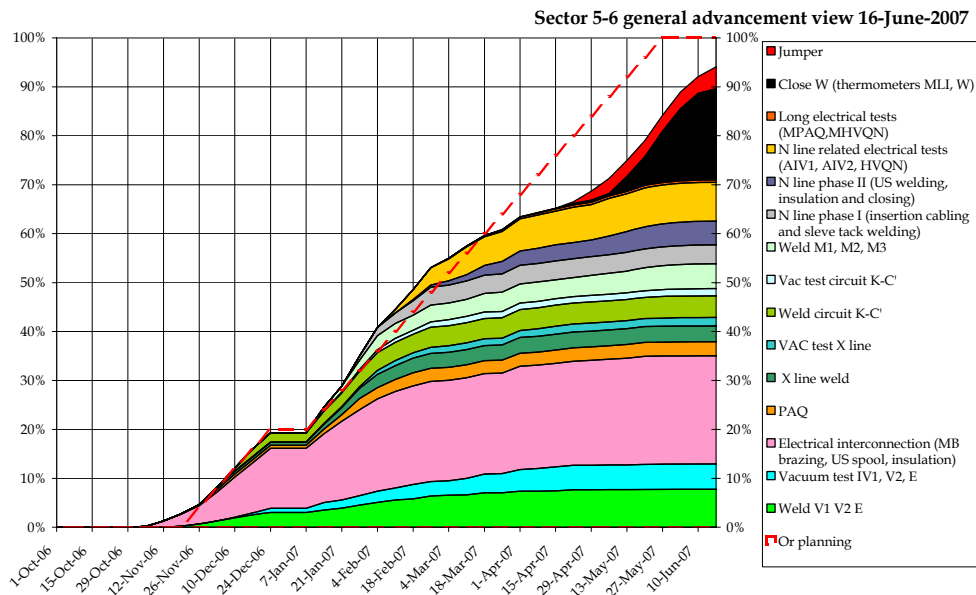


Fig. 11: General advancement view for sector 5-6.

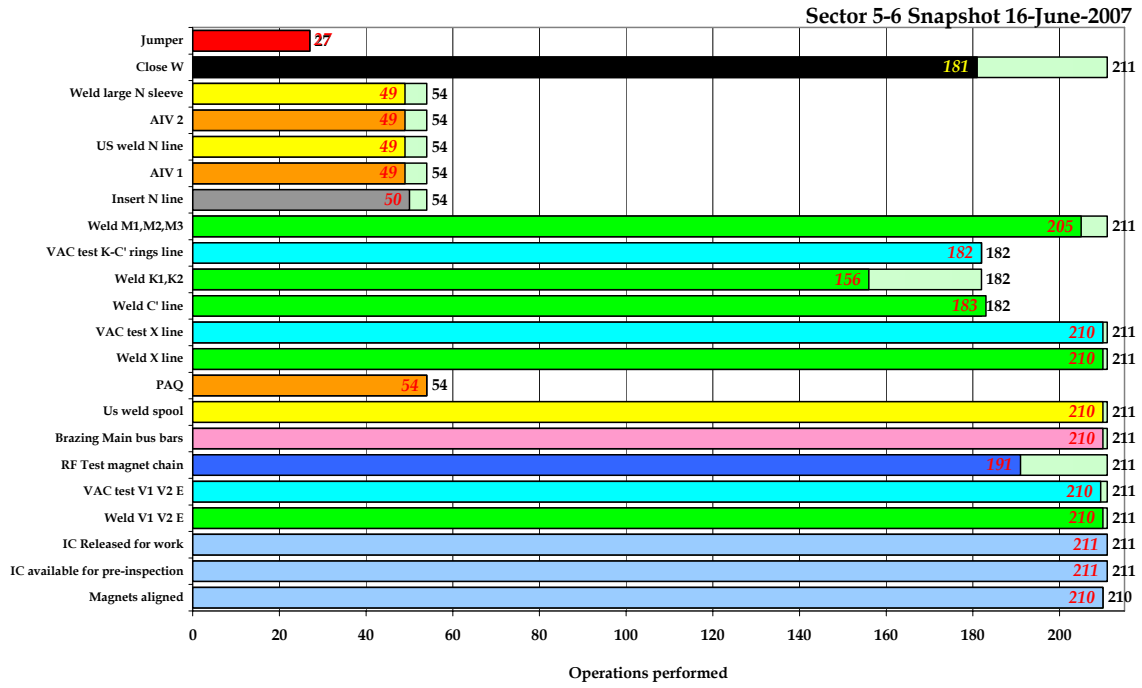


Fig. 12: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

## Sector 6-7

- Extended tests MPAQ and MHVQN performed.

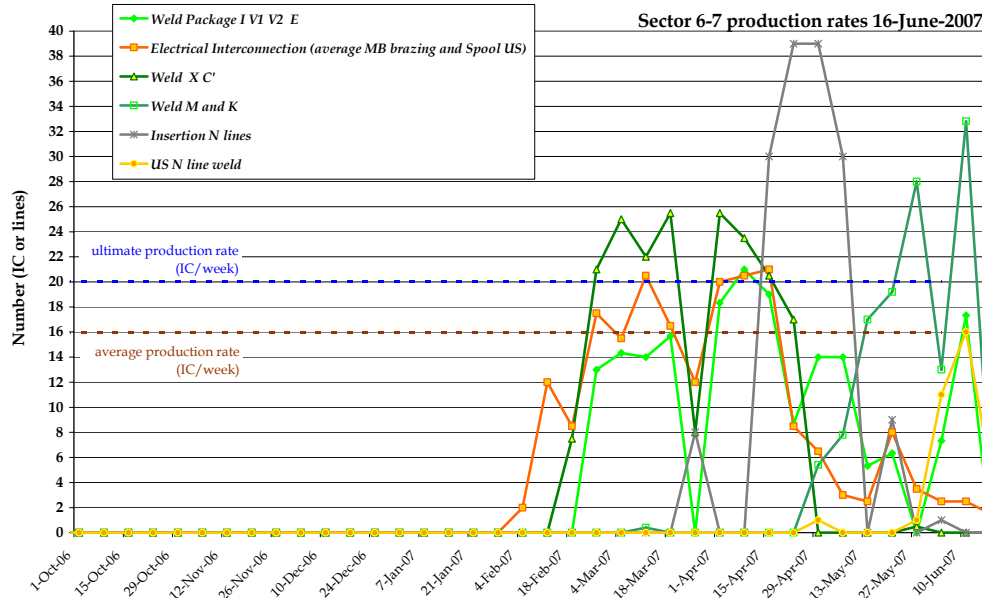


Fig. 13: Production rates in sector 6-7.

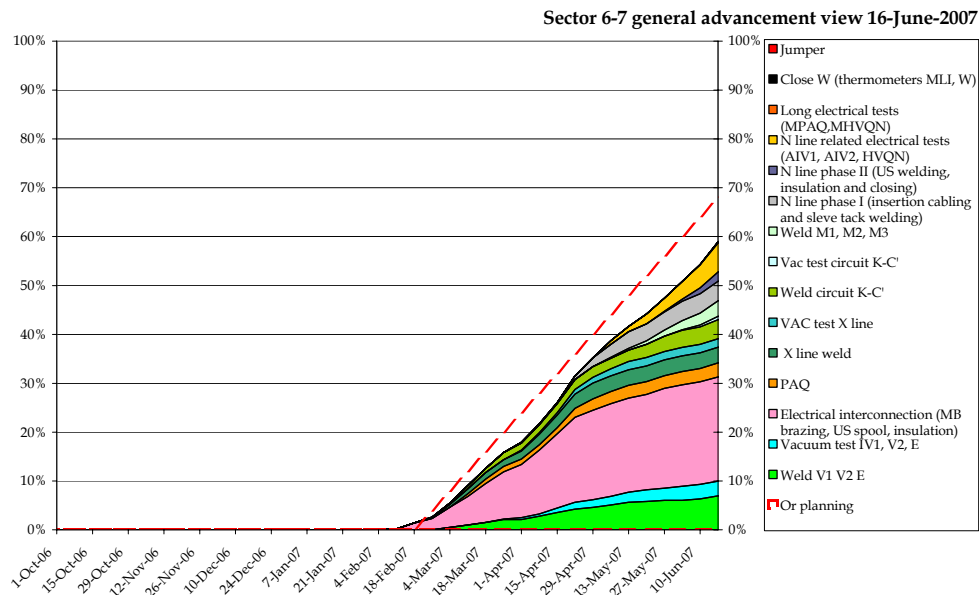


Fig. 14: General advancement view for sector 6-7.

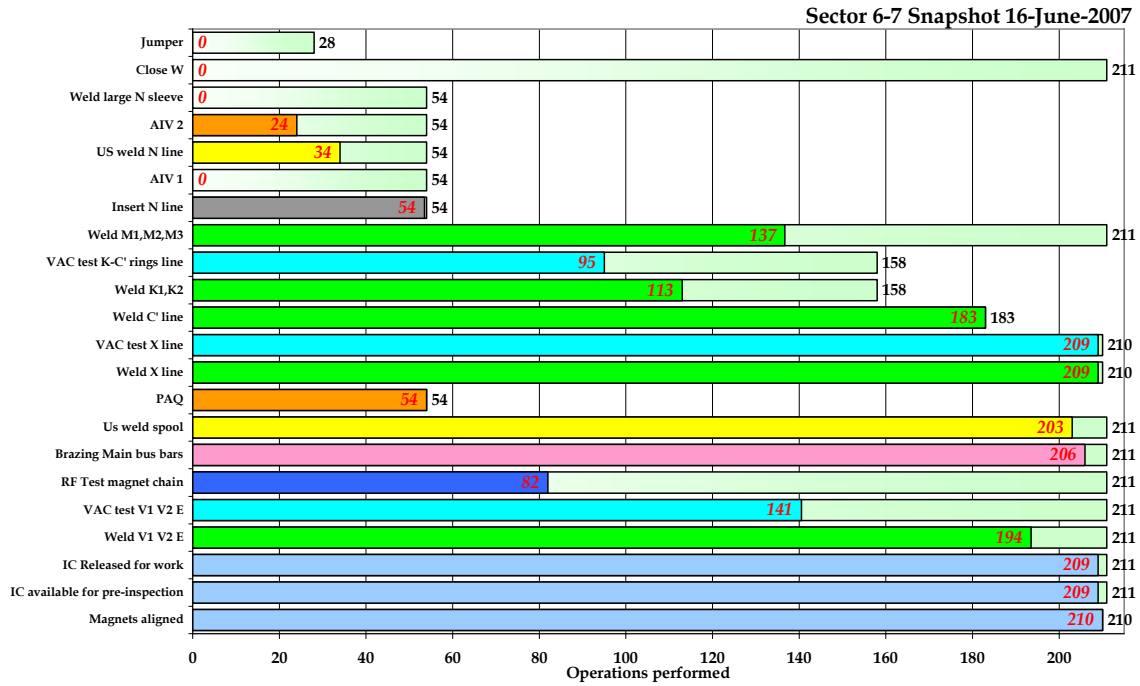


Fig. 15: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

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

- Pressure test successfully performed (without inner triplets).
- Consolidation ongoing to locate and repair 3 leaks (machine and QRL).

# Vacuum Tests by Sector

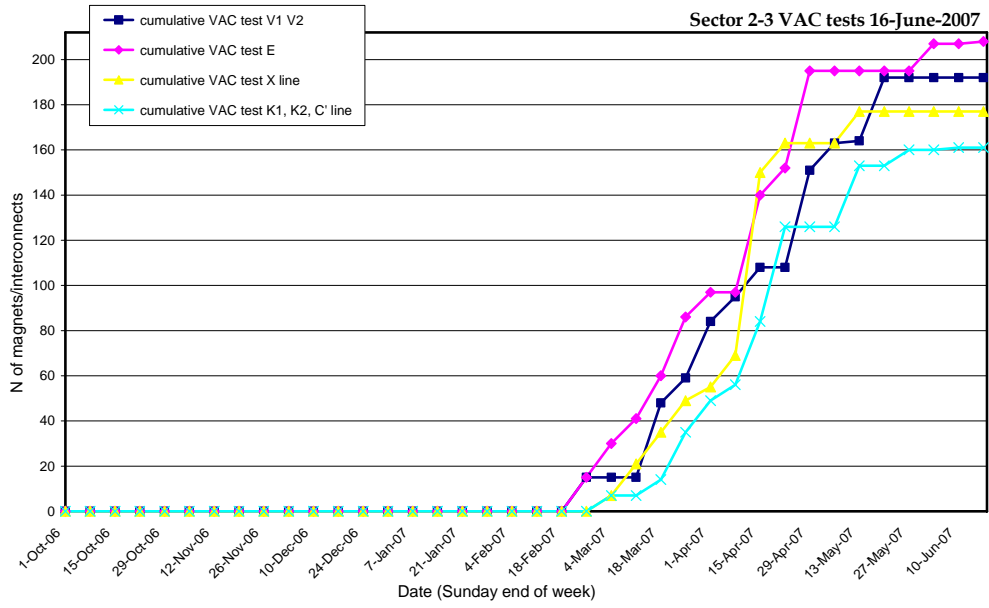


Fig. 16: Status of the VAC tests in sector 2-3.

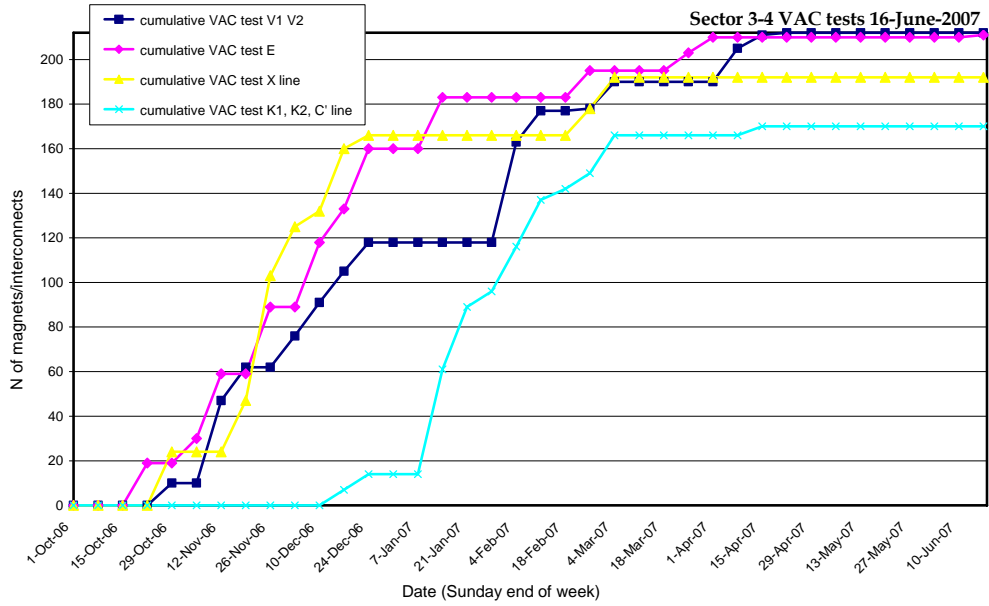


Fig. 17: Status of the VAC tests in sector 3-4.

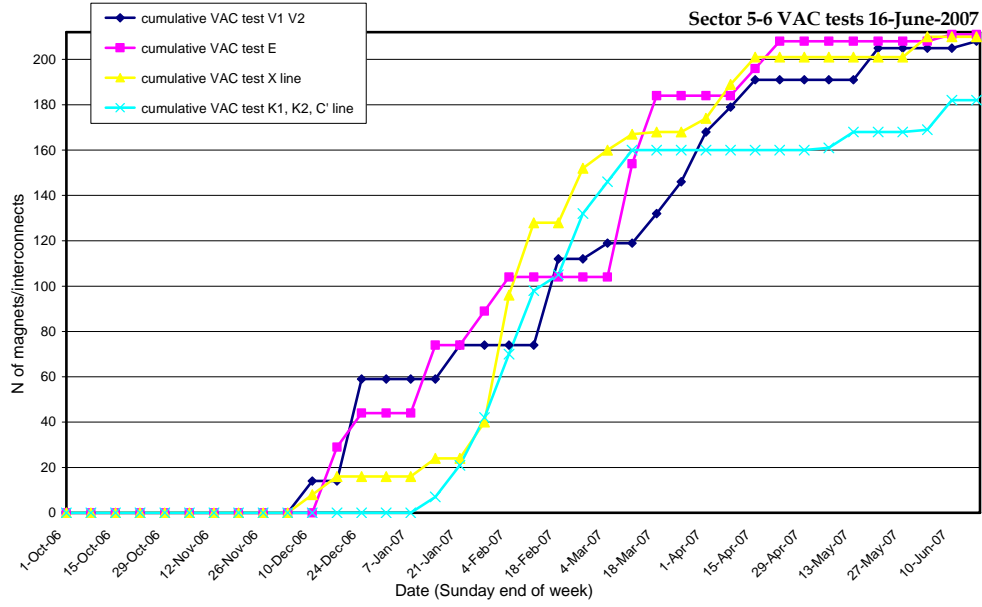


Fig. 18: Status of the VAC tests in sector 5-6.

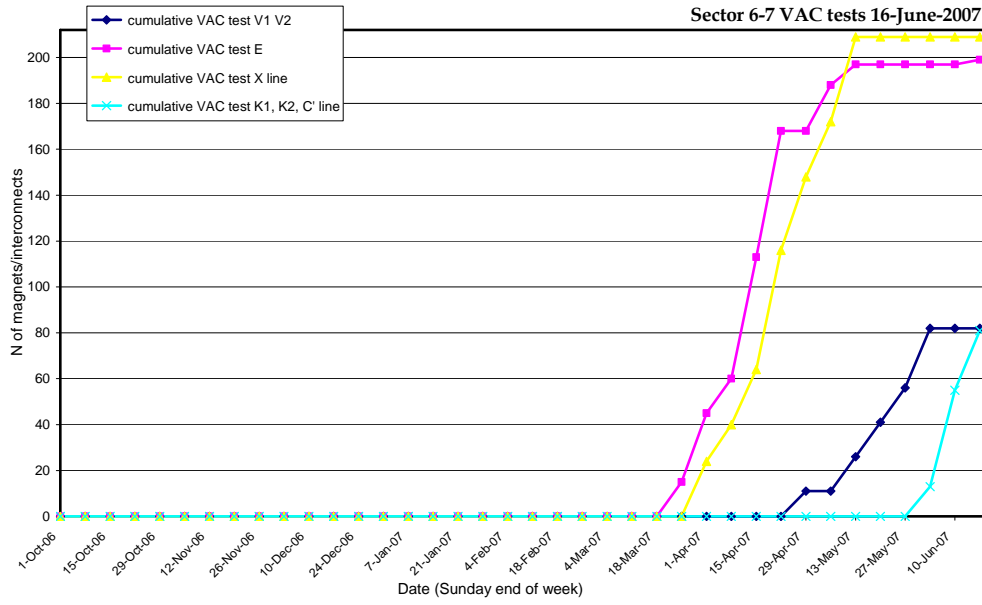


Fig. 19: Status of the VAC tests in sector 6-7.