

Status of Interconnect Works in the LHC Arcs and DS regions – weeks 29 - 32 (July 16 – August 11, 2007)

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

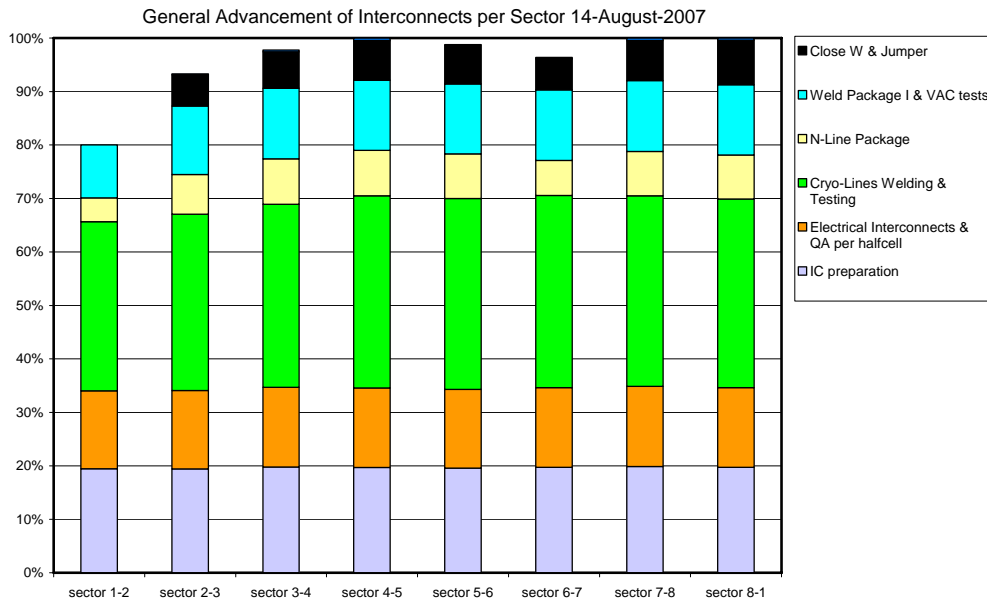
EDMS no. 861742

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during weeks 29 - 32 (July 16 – August 11, 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:

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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

- Following VAC tests on V1/V2 lines, first closures qualified.
- Welds of jumpers internal lines started.
- All K and M lines are welded, except the ones which have to remain open for jumper tests.

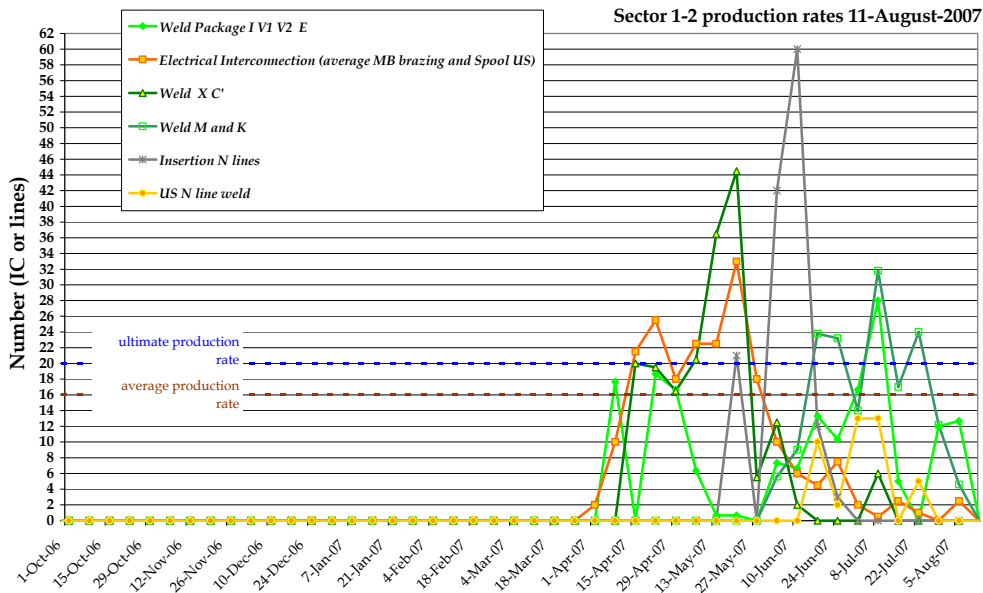


Fig. 1: Production rates in sector 1-2.

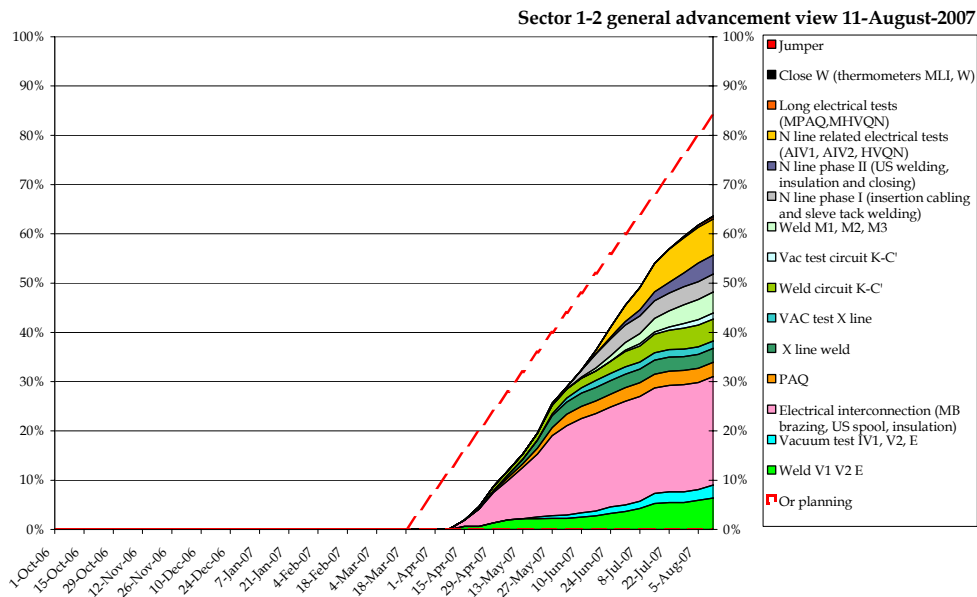


Fig. 2: General advancement view for sector 1-2.

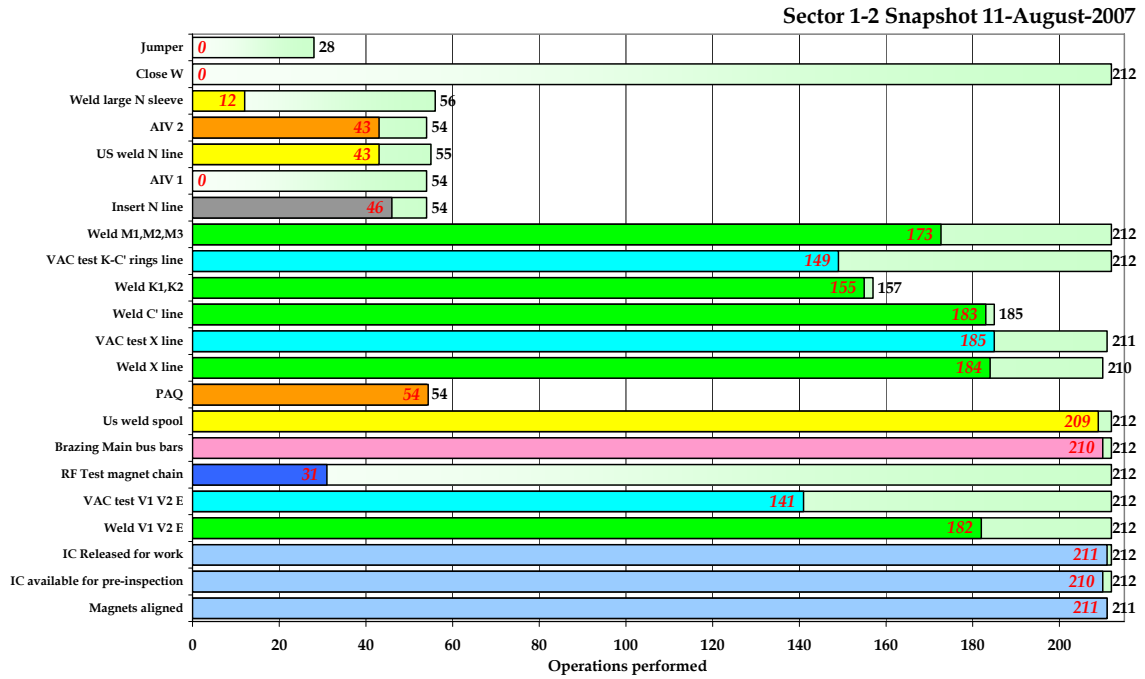


Fig. 3: Snapshot of work progress in sector 1-2 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 2-3

- Installation of Q11R2 performed. IC started in W33.
- DS L3: end of electrical tests in S33.
- 5 cold mass sectors leak tight.

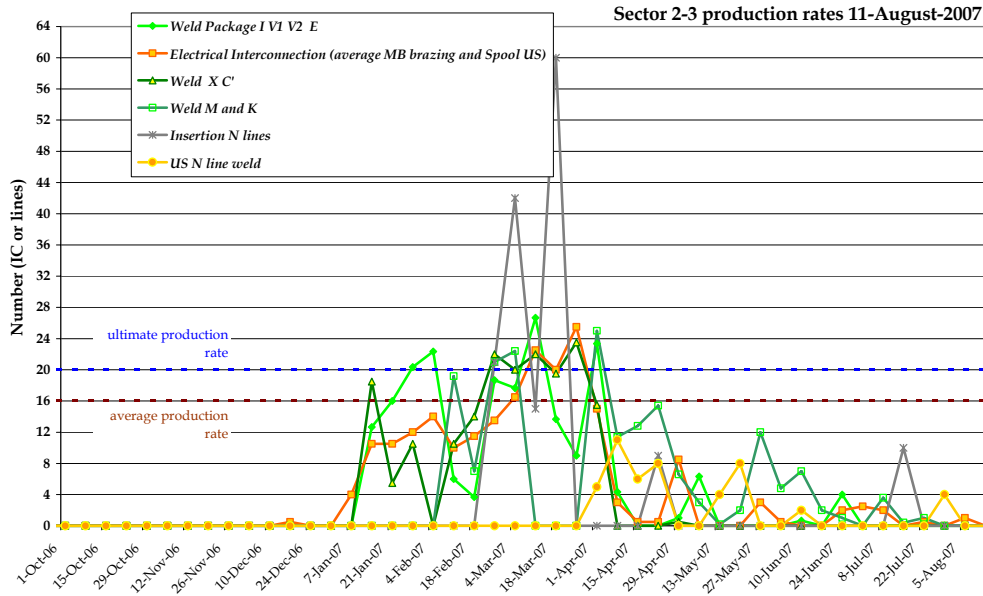


Fig. 4: Production rates in sector 2-3.

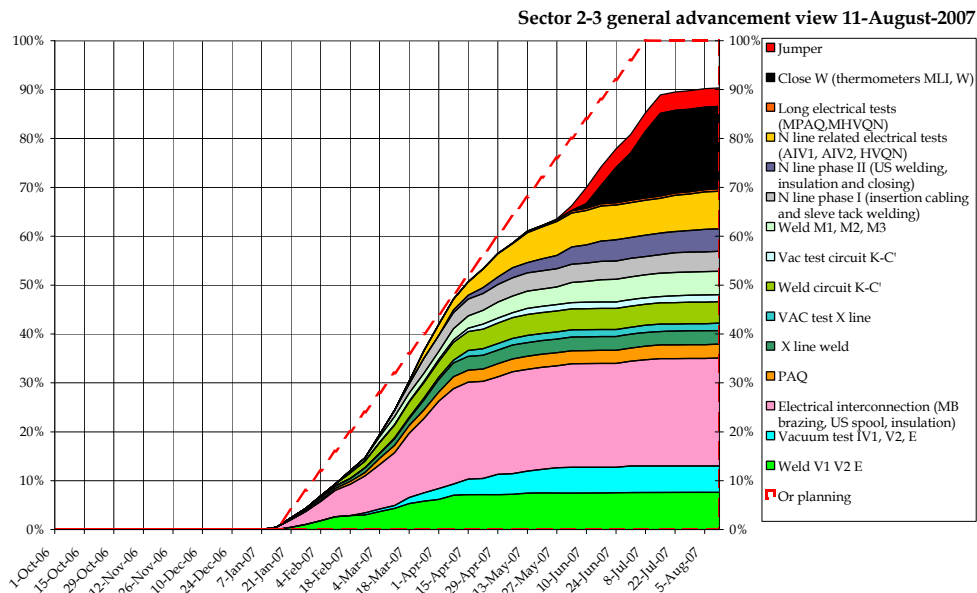


Fig. 5: General advancement view for sector 2-3.

Sector 2-3 Snapshot 11-August-2007

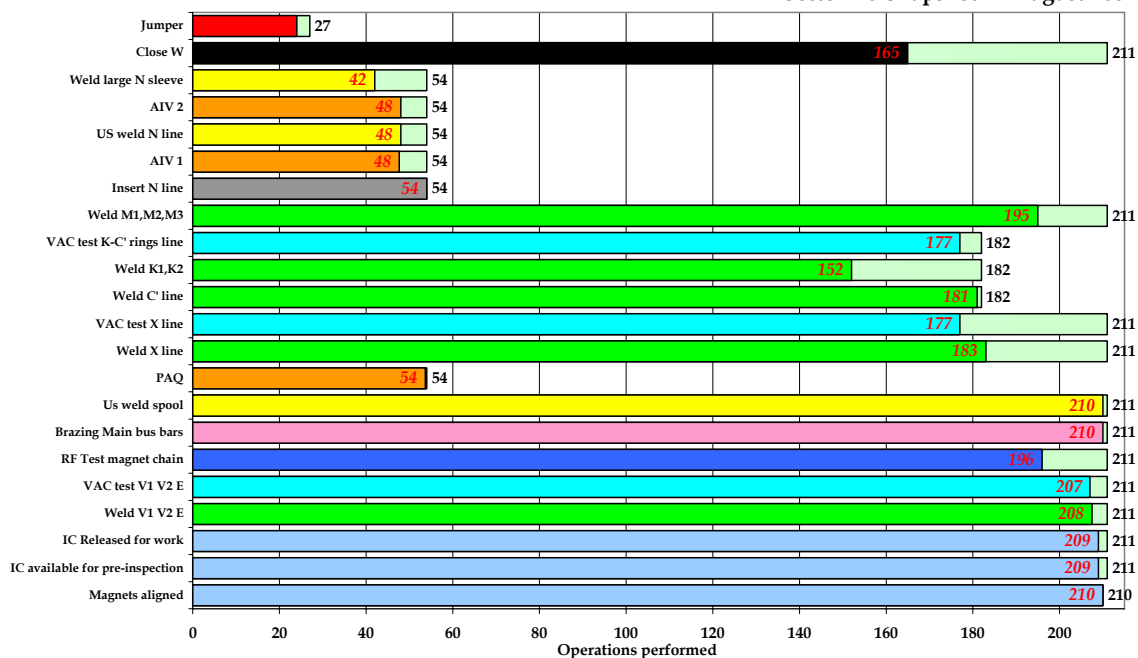


Fig. 6: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 3-4

- 10 vacuum sectors leak tight, 1 leaky (leak localized) and 1 leak to be localized.
- Electrical tests and welds in DS R3 completed. W bellow closure in preparation.

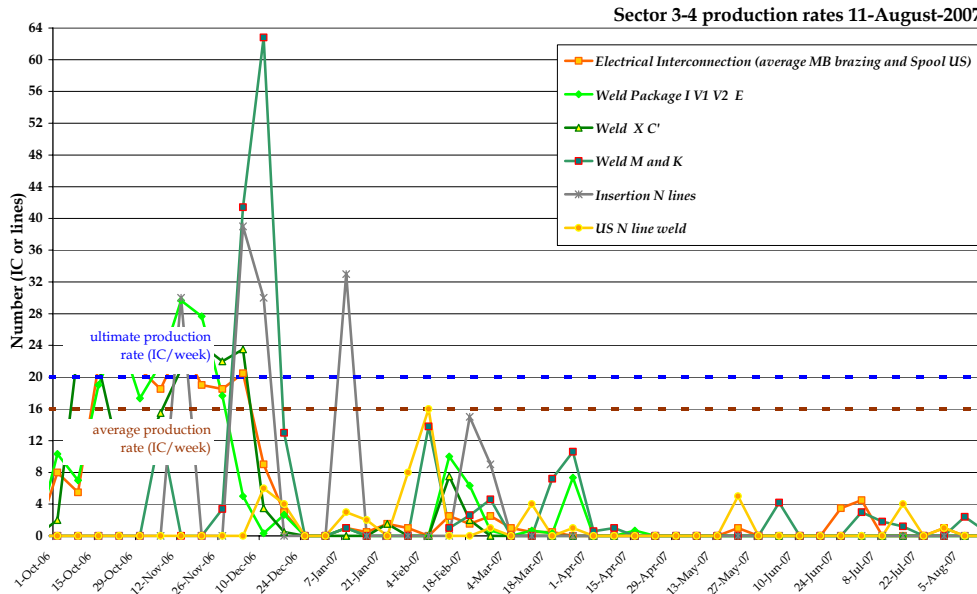


Fig. 7: Production rates in sector 3-4.

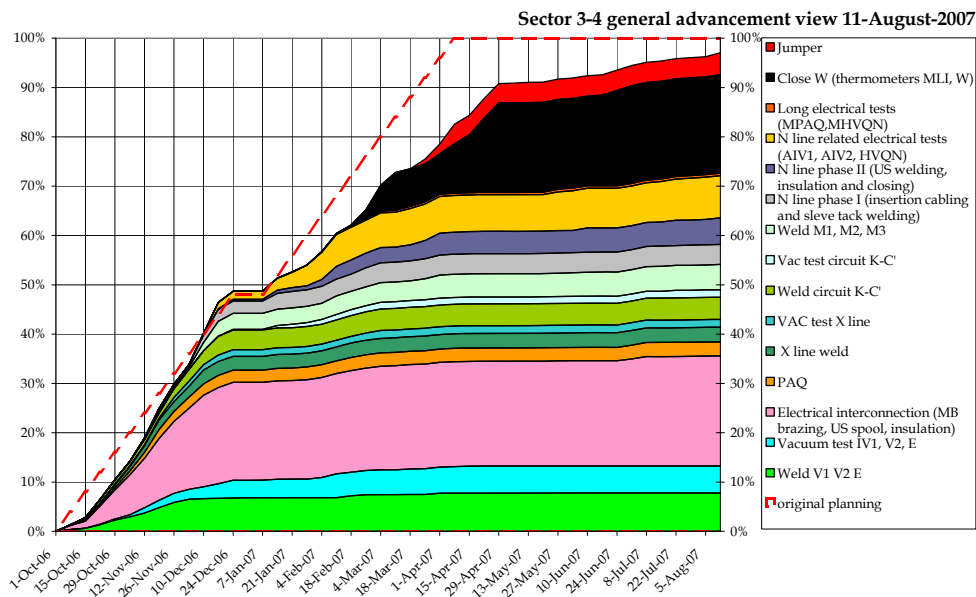


Fig. 8: General advancement view for sector 3-4.

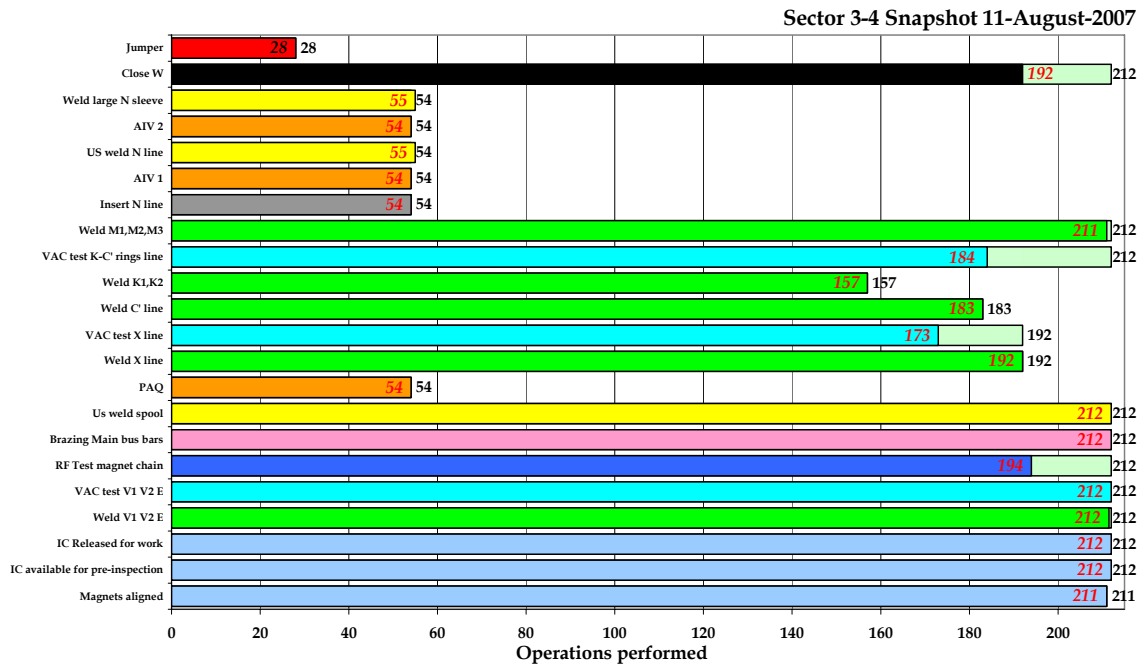


Fig. 9: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

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

- Cool-down in progress

Sector 5-6

- 12 vacuum sectors provided to VAC: 8 leak tight, 4 leaky (1 repaired, 1 under repair and 2 leaks to be localized).

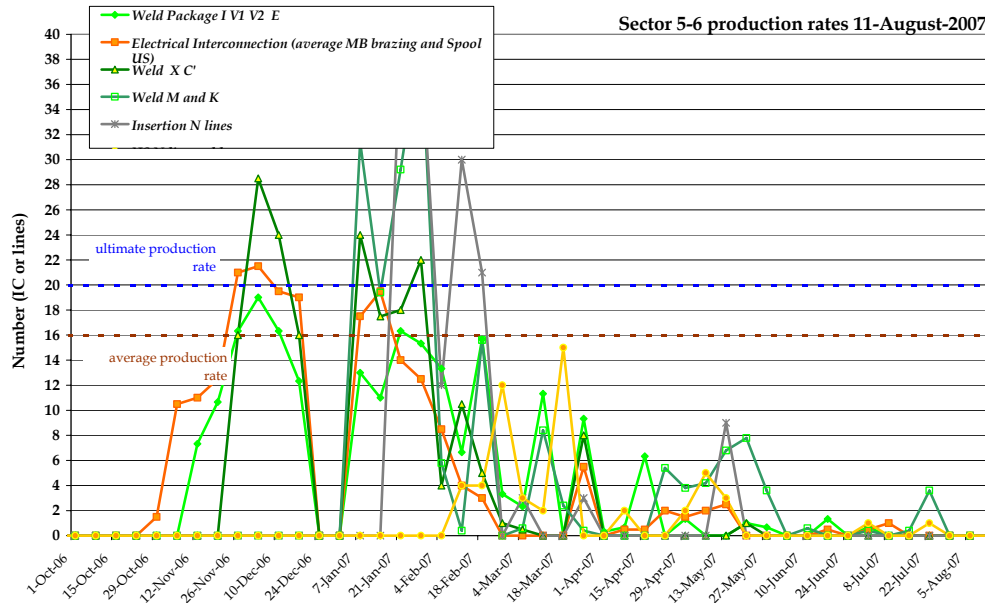


Fig. 10: Production rates in sector 5-6.

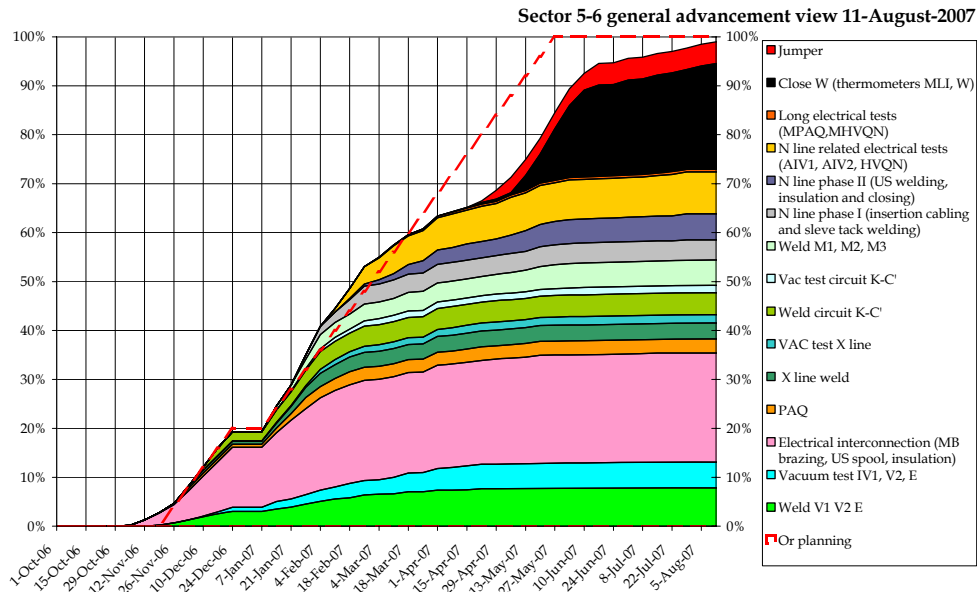


Fig. 11: General advancement view for sector 5-6.

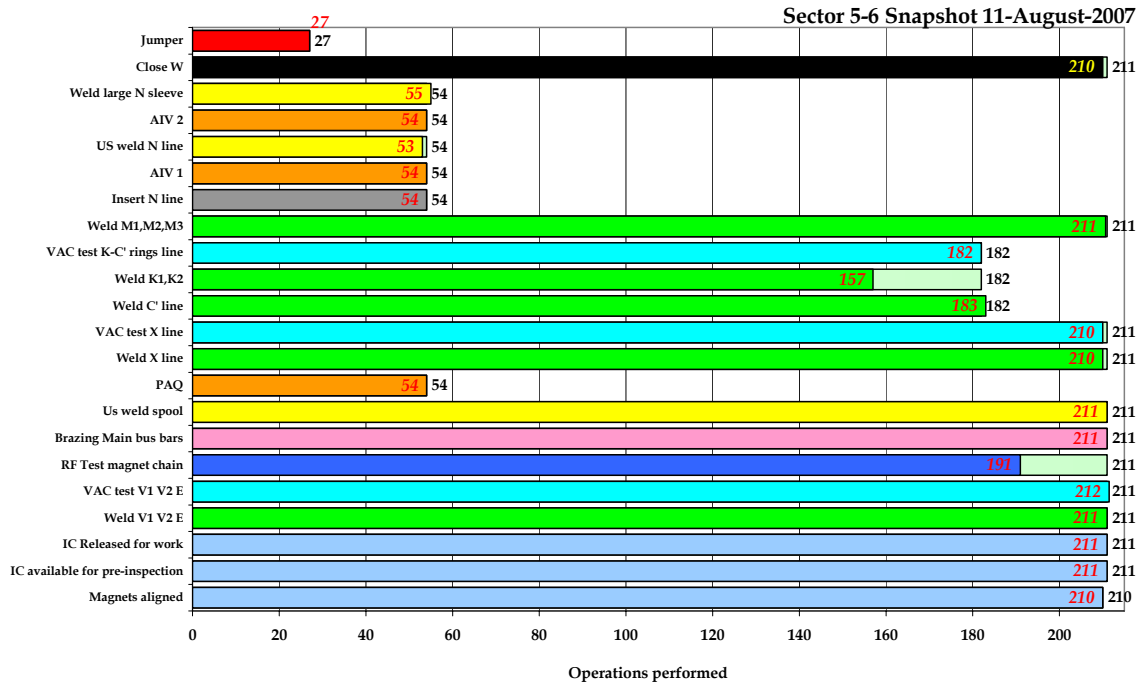


Fig. 12: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 6-7

- 175 IC closed.
- 5 VAC sectors provided to VAC.
- Jumper welds ongoing.

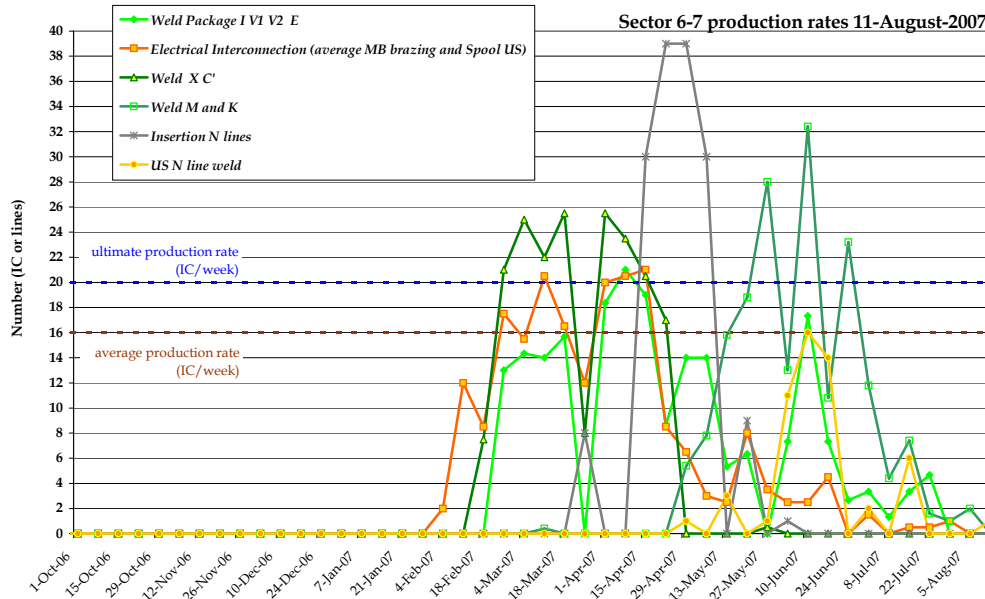


Fig. 13: Production rates in sector 6-7.

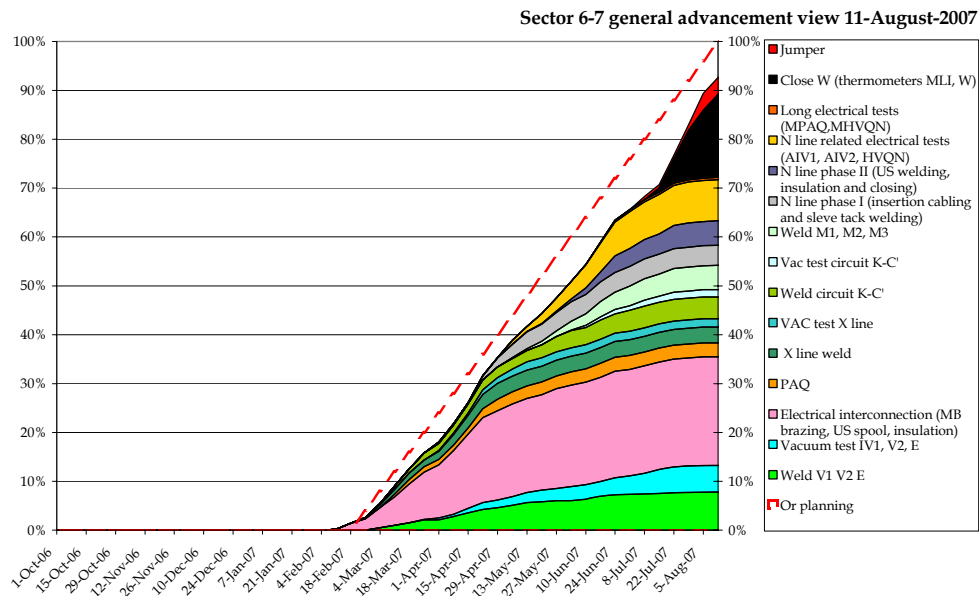


Fig. 14: General advancement view for sector 6-7.

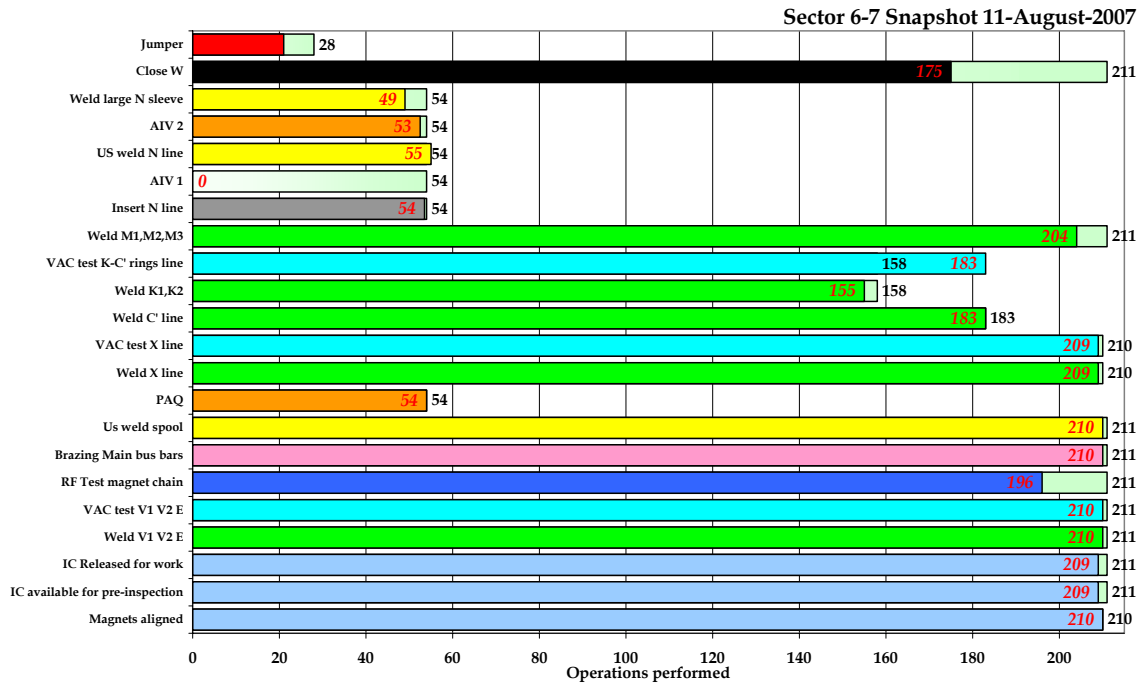


Fig. 15: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 7-8

- Consolidation ongoing.
- For more details, please refer to MARIC and ICC presentations.

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

- Consolidation ongoing.
- 17R8 : special leak test detection with use of Neon ongoing. Leak localized on SSS080. A new SSS for possible replacement is under cryostating.

Vacuum Tests by Sector

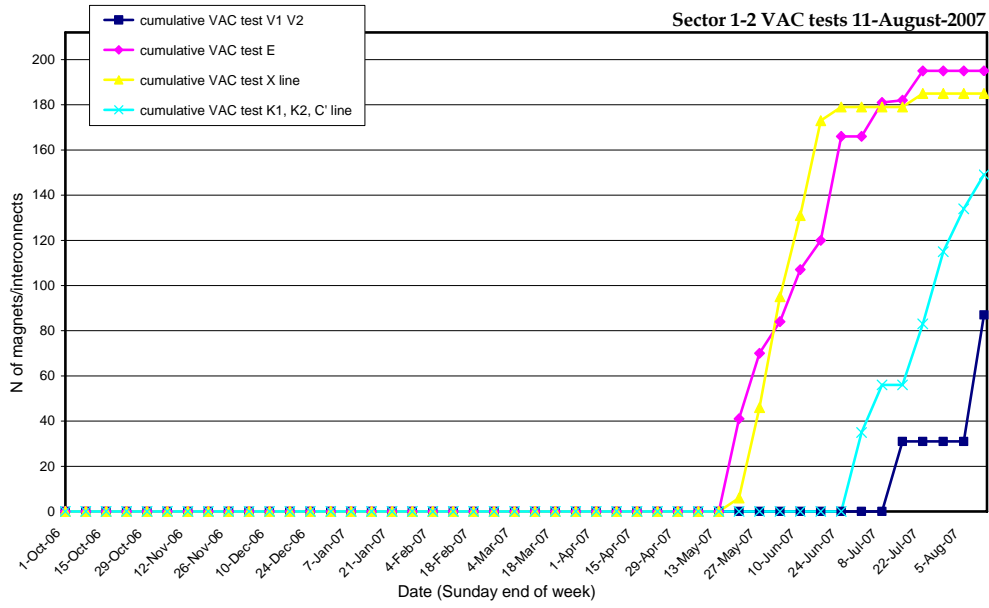


Fig. 16: Status of the VAC tests in sector 1-2.

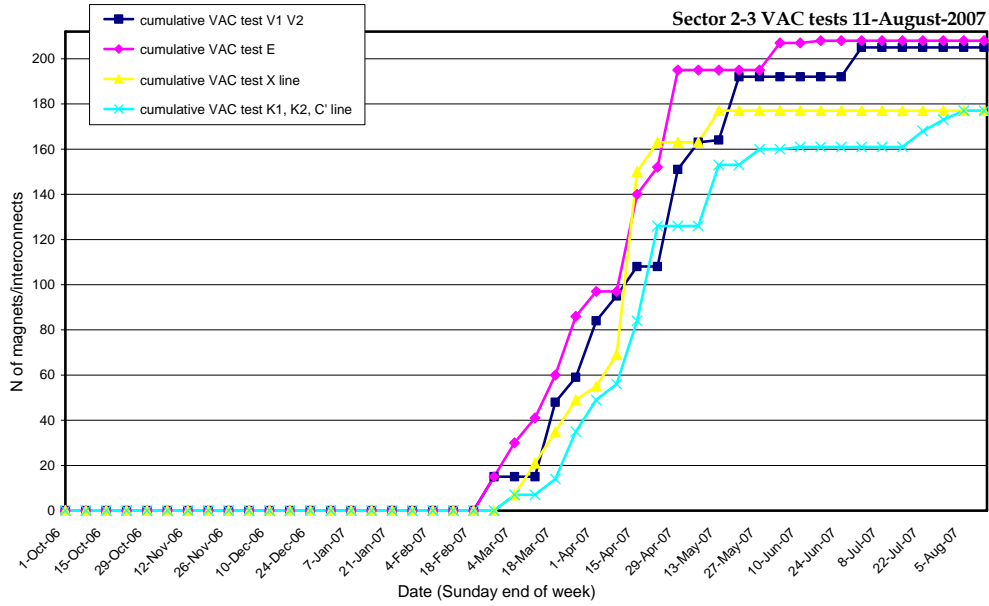


Fig. 17: Status of the VAC tests in sector 2-3.

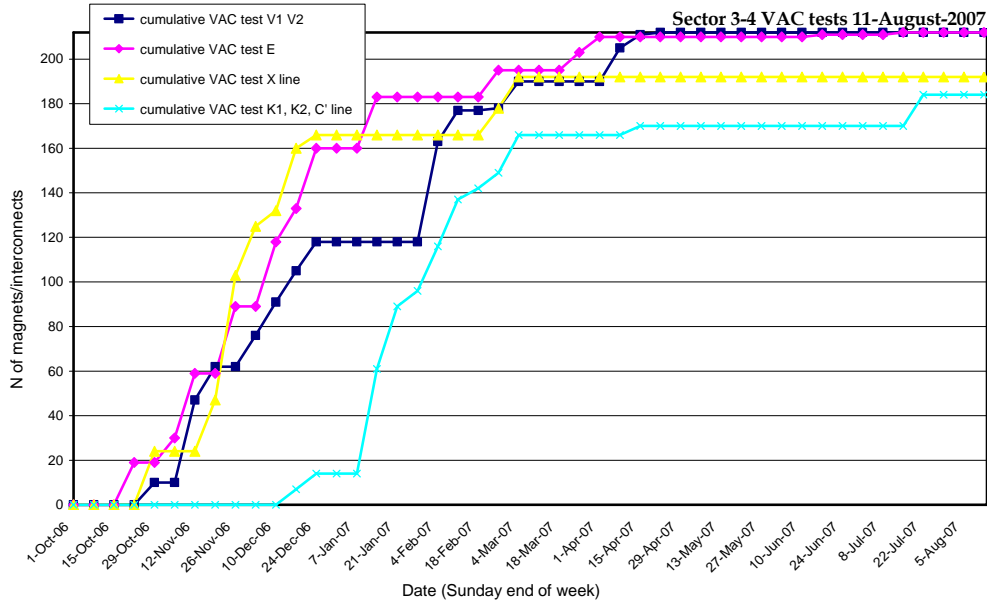


Fig. 18: Status of the VAC tests in sector 3-4.

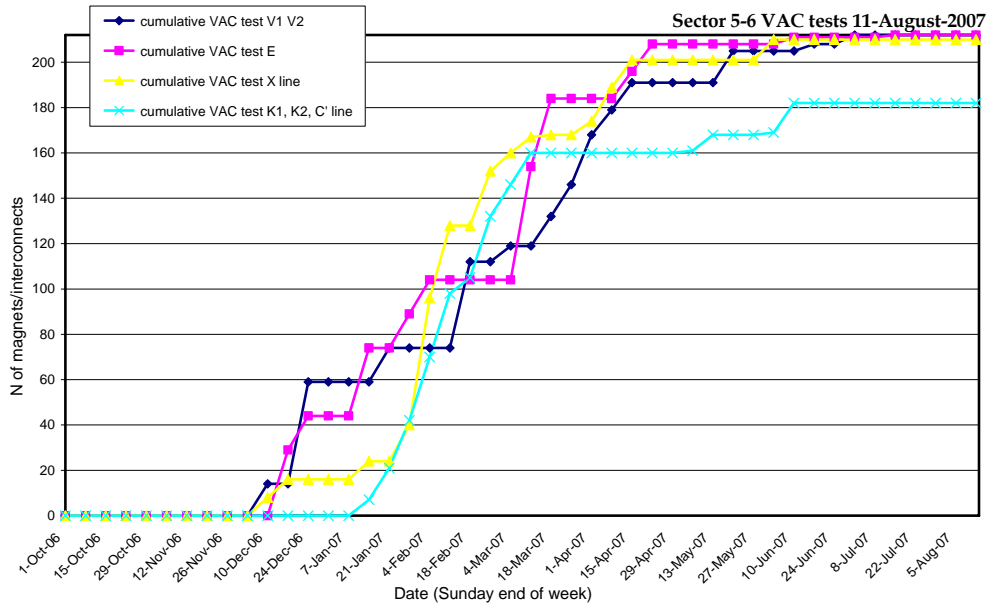


Fig. 19: Status of the VAC tests in sector 5-6.

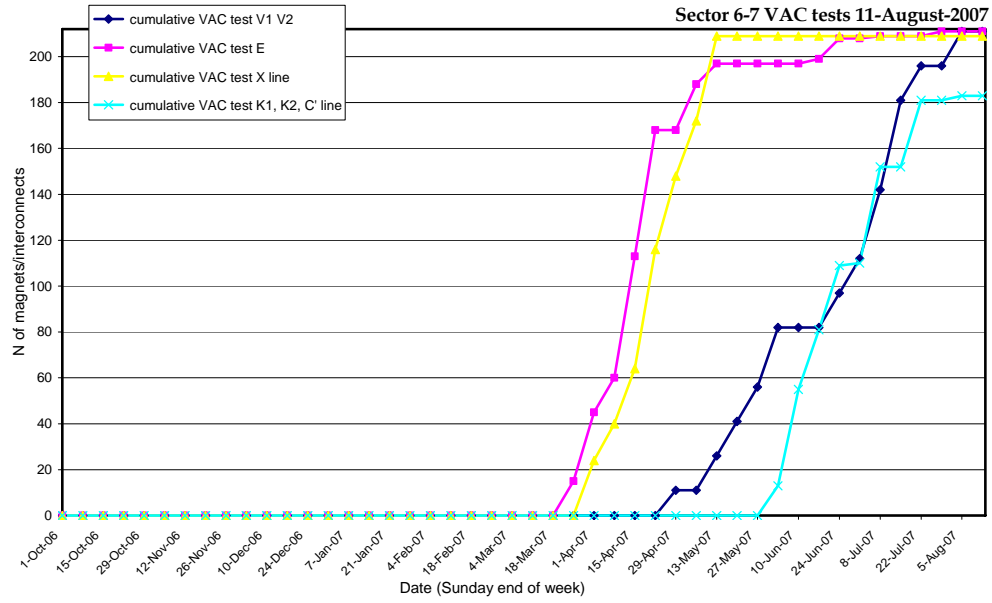


Fig. 20: Status of the VAC tests in sector 6-7.