

# Status of Interconnect Works in the LHC Arcs and DS regions – weeks 10-12 (March 5 – 24, 2007)

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

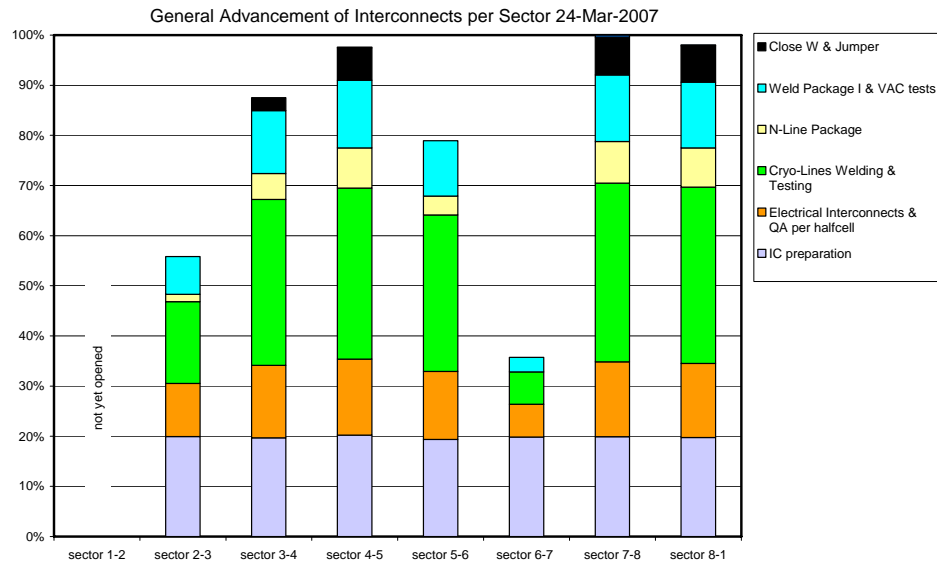
EDMS no. 831885

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during weeks 10-12 (March 5 – 24, 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: 1224 MB, 468 SSS, 108 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> |
|-------------------------|----------------|
| 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

- 46 Nline segments out of 56 inserted,
- Weld activities C', X-lines ongoing.

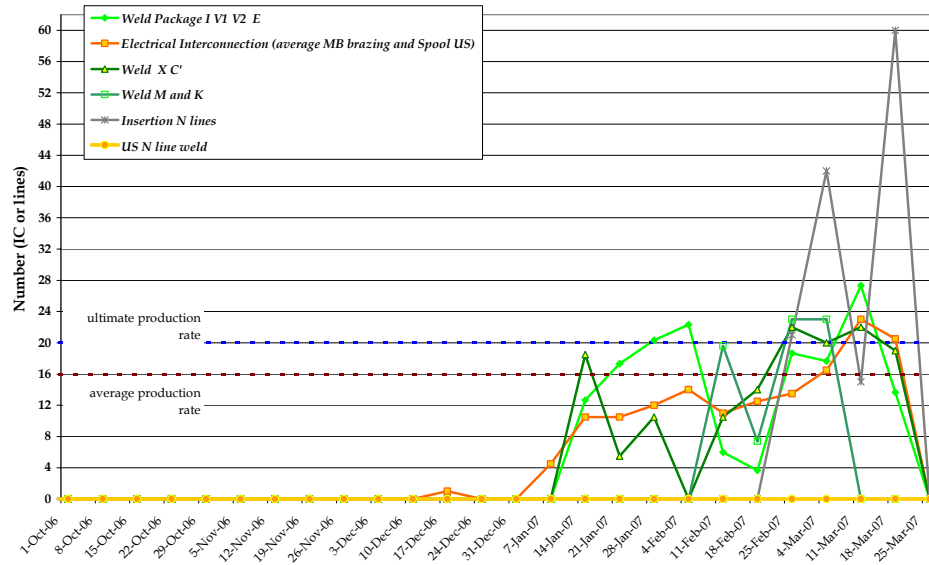


Fig. 1: Production rates in sector 2-3.

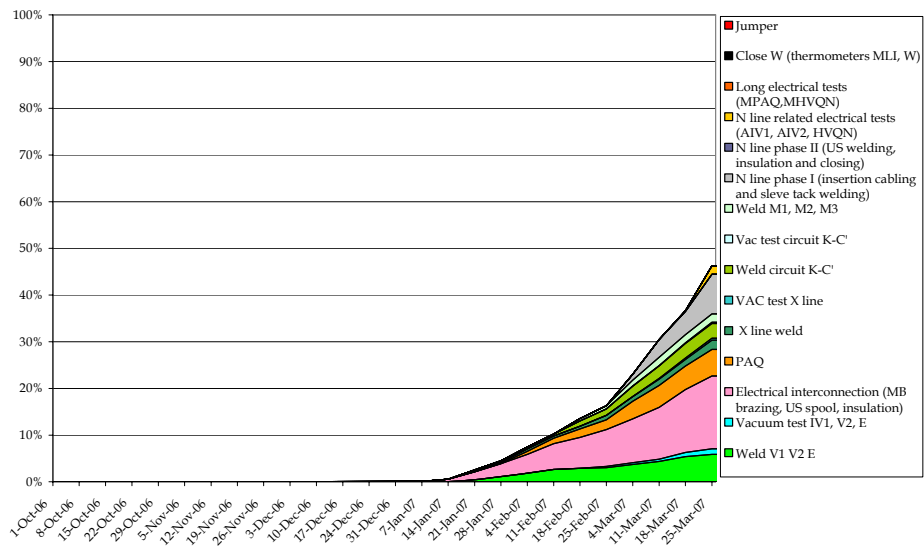


Fig. 2: General advancement view for sector 2-3.

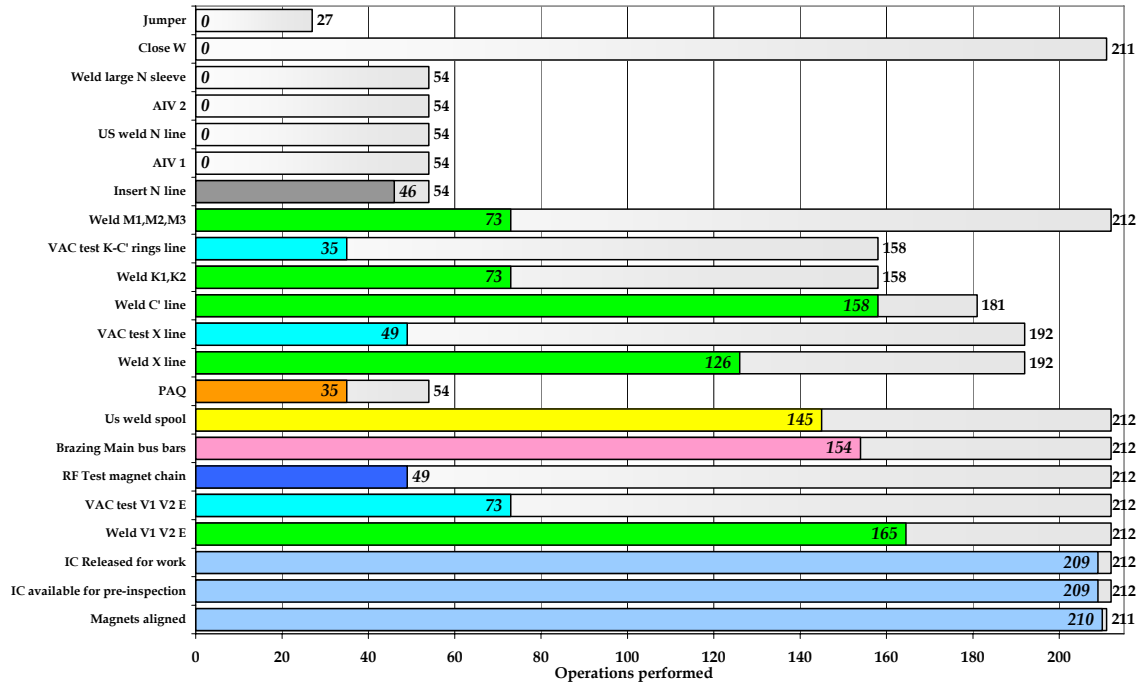


Fig. 3: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

### Sector 3-4

- All extended electrical tests (Q11 to Q11) completed.
- E lines between Q7/Q7 completed.
- All plug-in-modules (PIMs) which were declared non-conform due to shocks are cut.

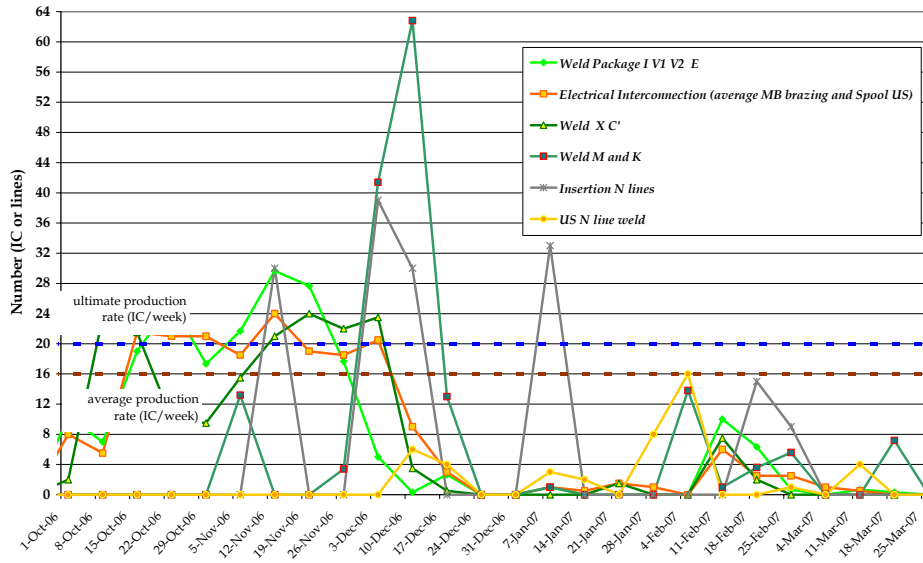


Fig. 4: Production rates in sector 3-4.

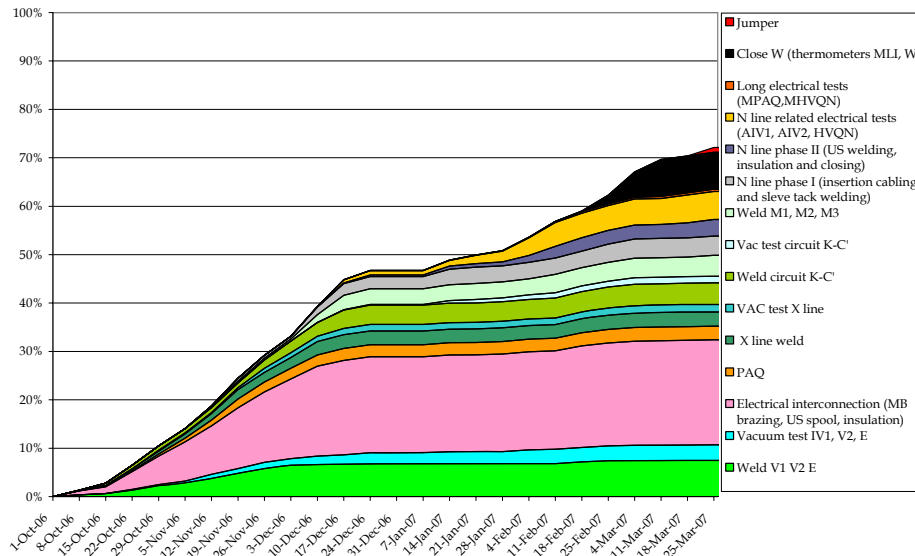


Fig. 5: General advancement view for sector 3-4.

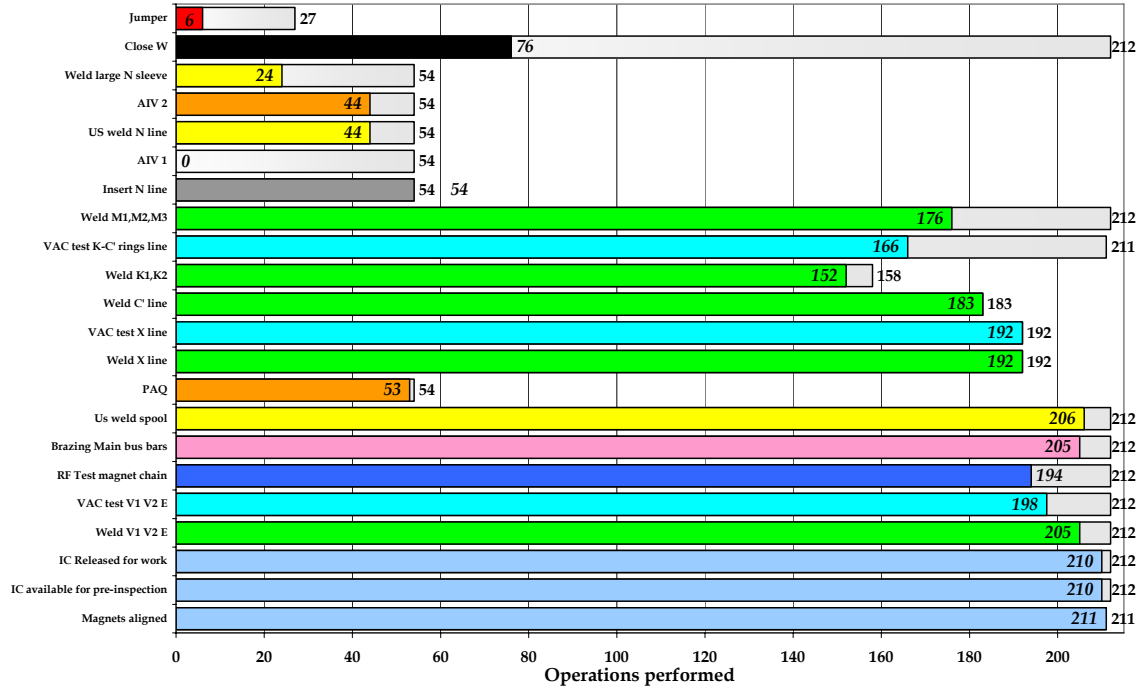


Fig. 6: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

## Sector 4-5

- Repairs of Q11R4 started,
- Re-start of closing of W-bellows planned for next week.

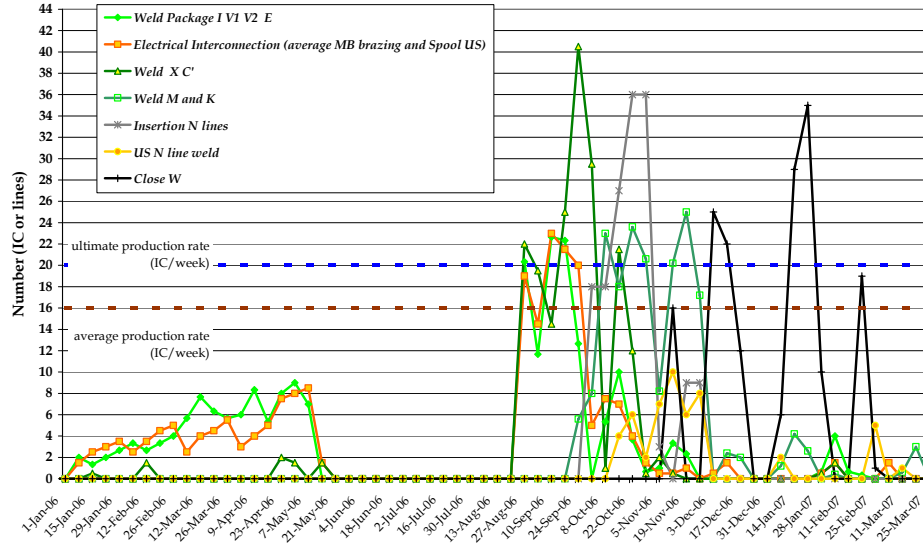


Fig. 7: Production rates in sector 4-5.

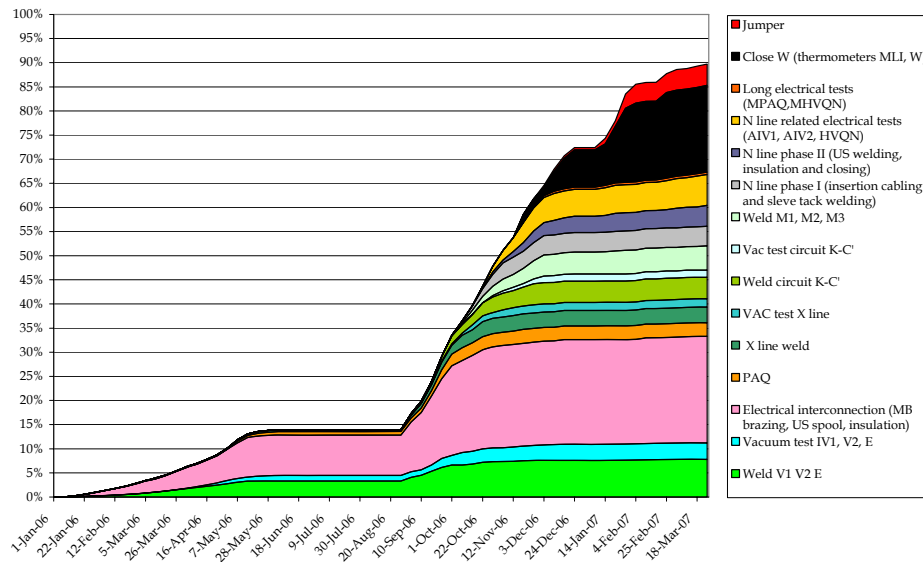


Fig. 8: General advancement view for sector 4-5.

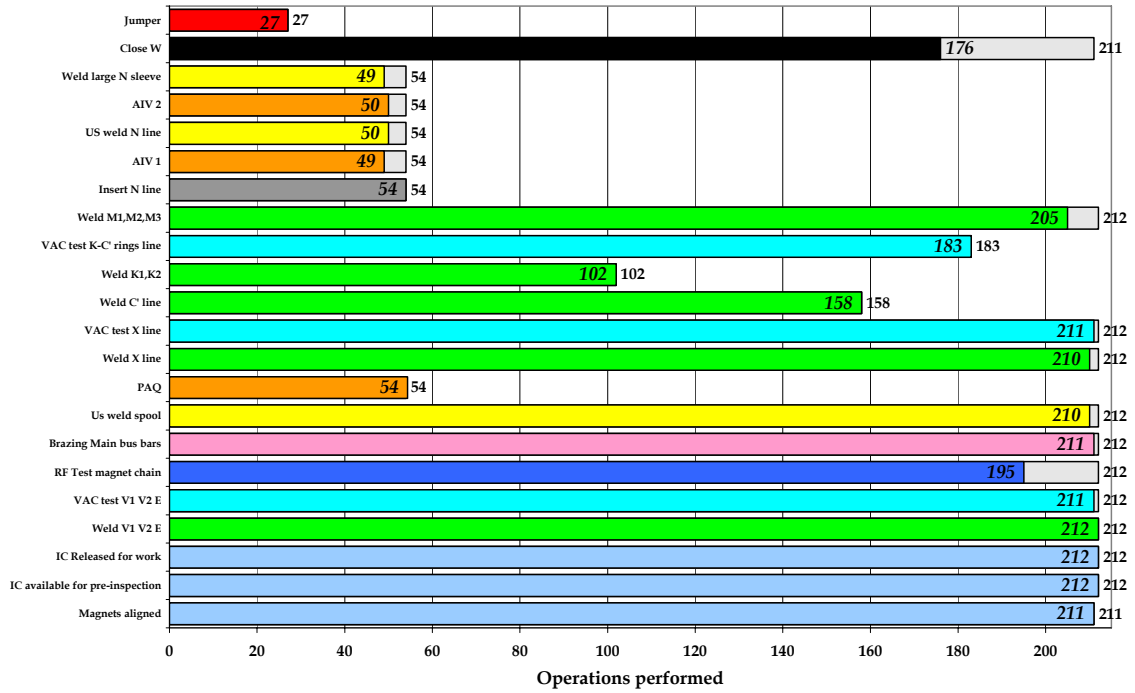


Fig. 9: Snapshot of work progress in sector 4-5 showing the number of operations achieved in total with respect to the total number of operations necessary.



## Sector 5-6

- 4<sup>th</sup> HVQN accomplished,
- Insertion of missing plug-in modules (PIMs) started,
- Inspection for closing of W-bellows started.

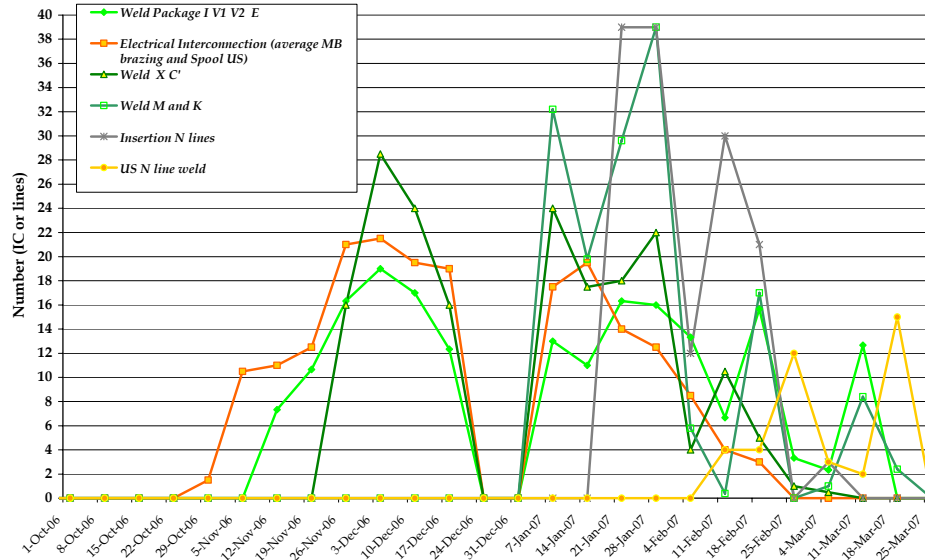


Fig. 10: Production rates in sector 5-6.

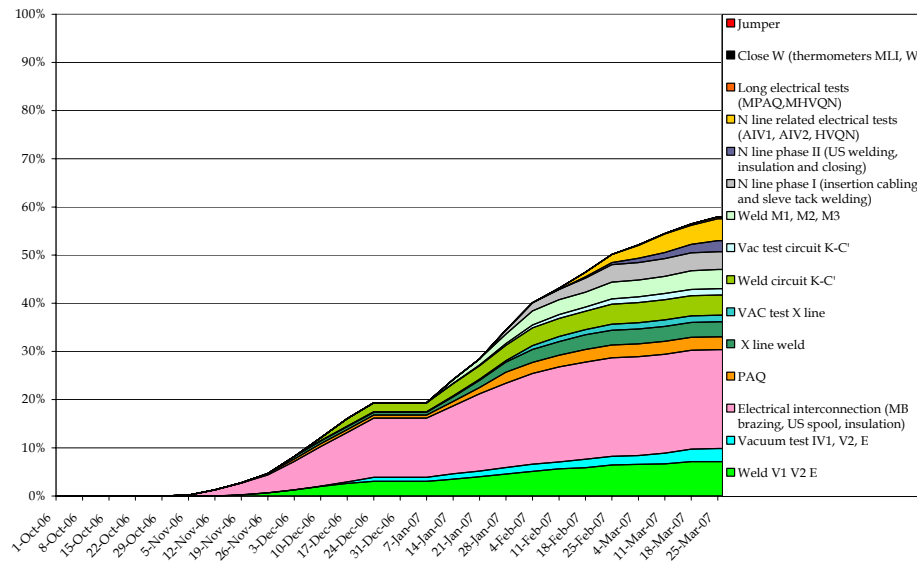


Fig. 11: General advancement view for sector 5-6.

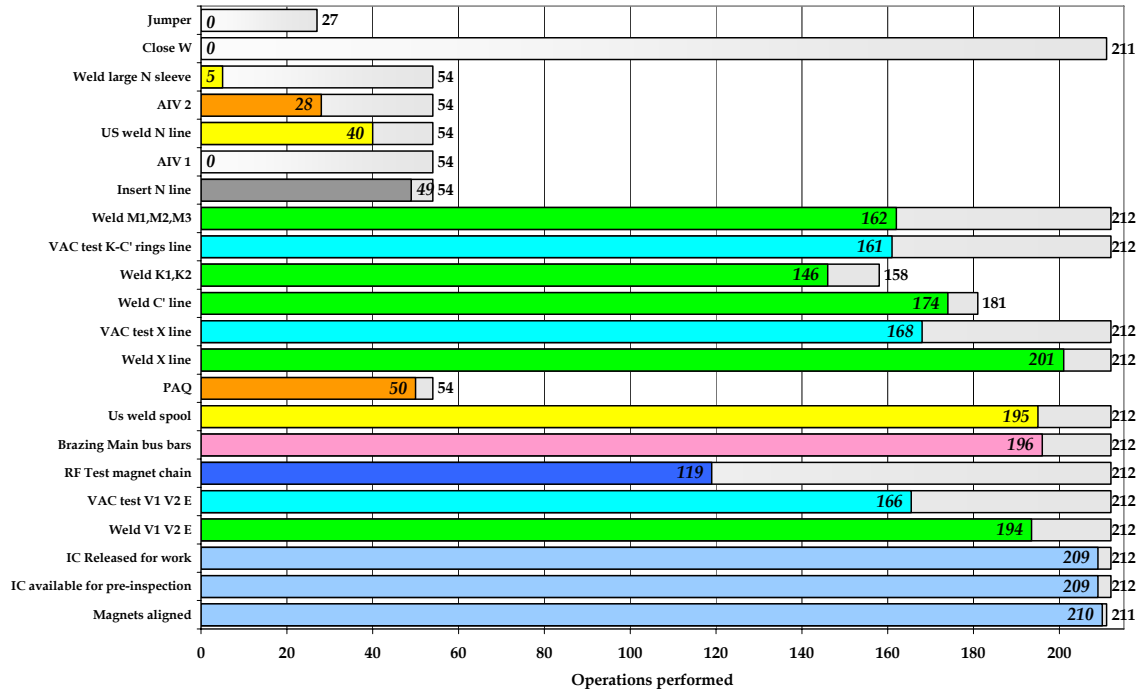


Fig. 12: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

## Sector 6-7

- Welds C', X-line ongoing,
- 8 Vacuum tests V1, V2, E accomplished.

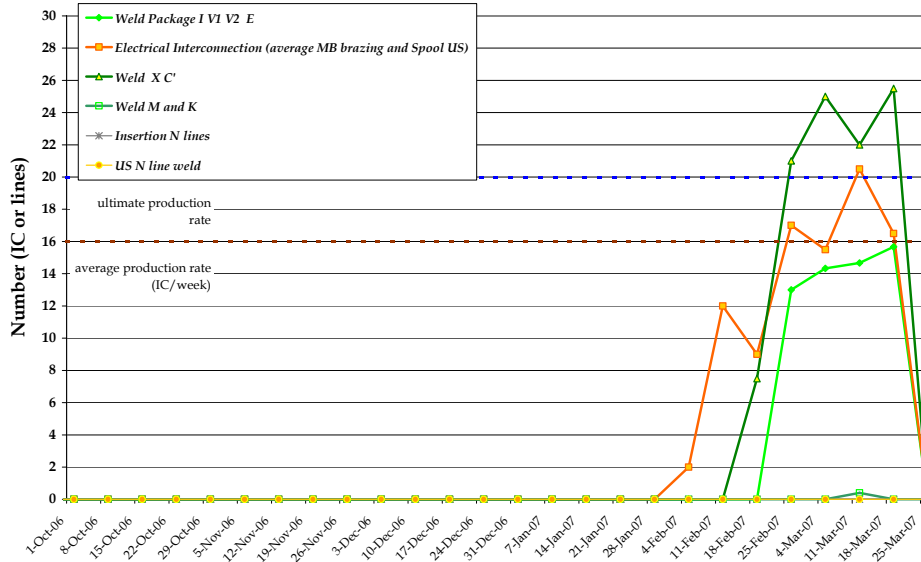


Fig. 13: Production rates in sector 6-7.

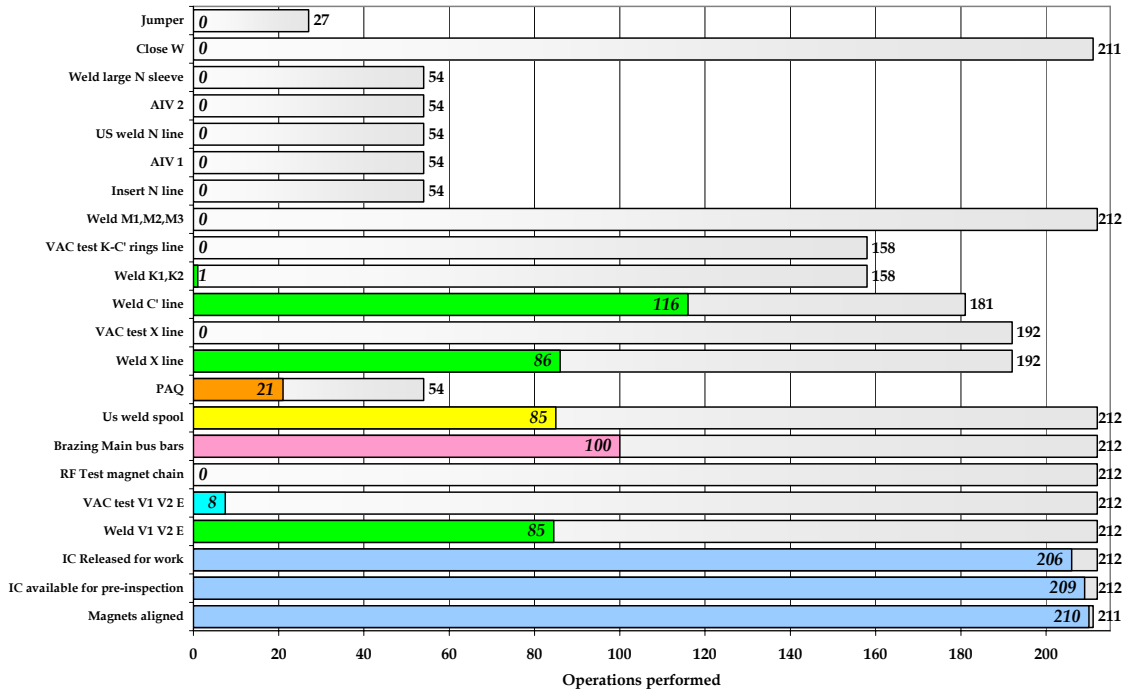


Fig. 14: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

## Sector 8-1

- Electrical tests in DS-L1 finished,
- All W-bellows closed except DS areas,
- 26 out of 28 jumpers welded.

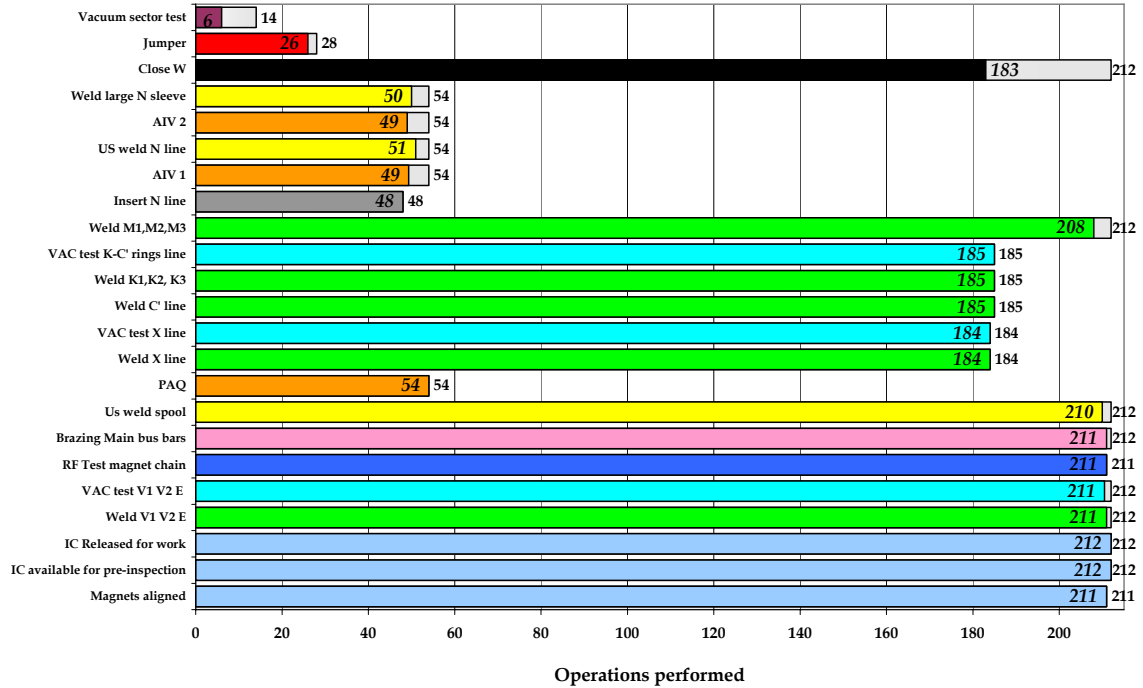


Fig. 15: Snapshot of work progress in sector 8-1 showing the number of operations achieved in total with respect to the total number of operations needed.

## Vacuum Tests by Sector

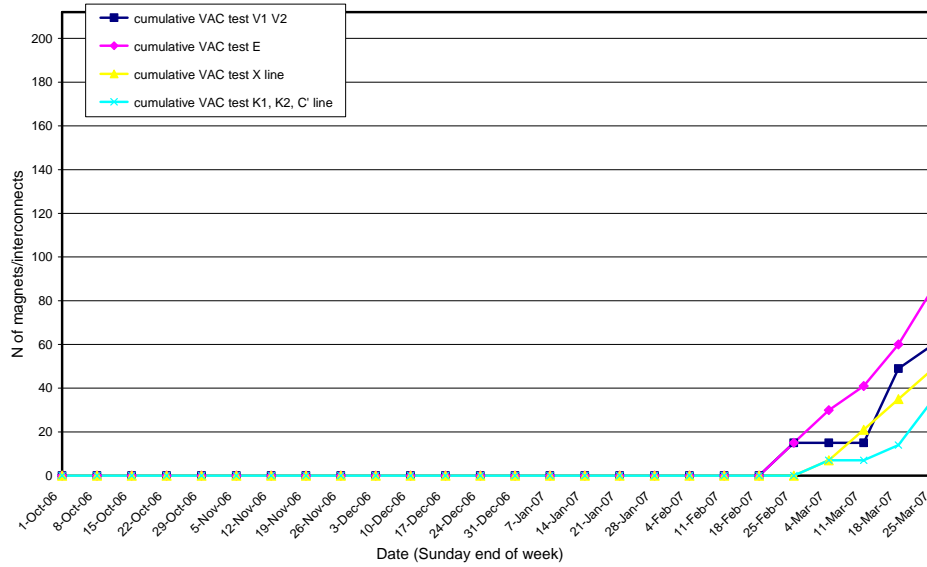


Fig. 16: Status of the VAC tests in sector 2-3.

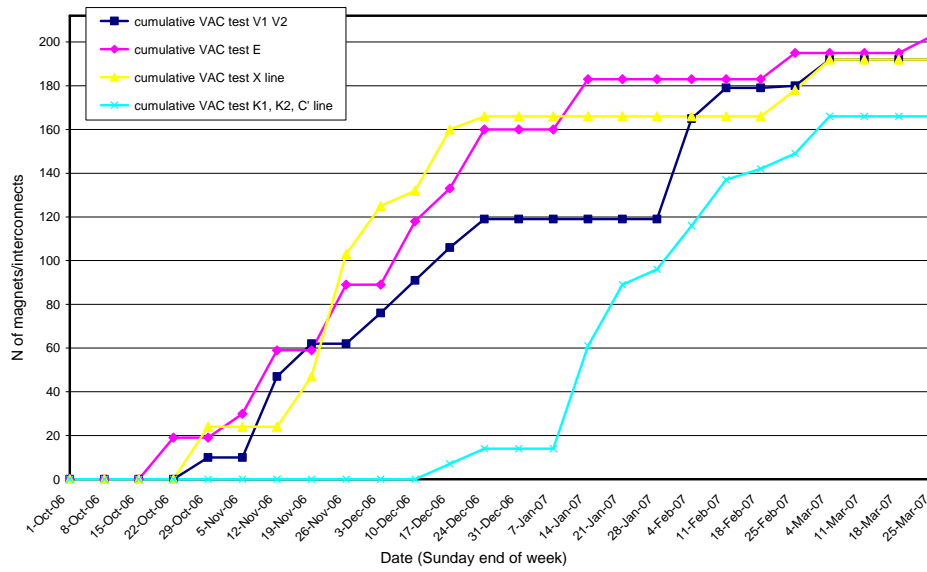


Fig. 17: Status of the VAC tests in sector 3-4.

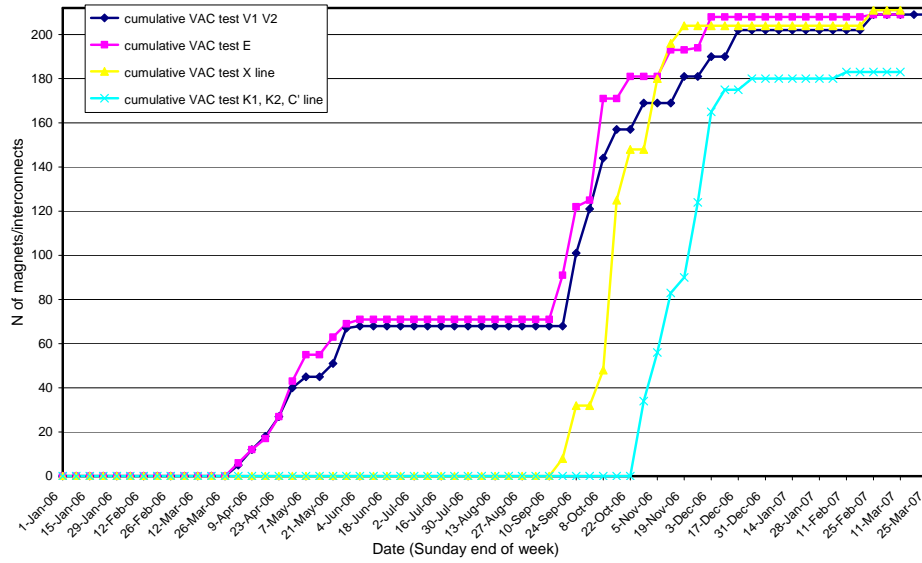


Fig. 18: Status of the VAC tests in sector 4-5.

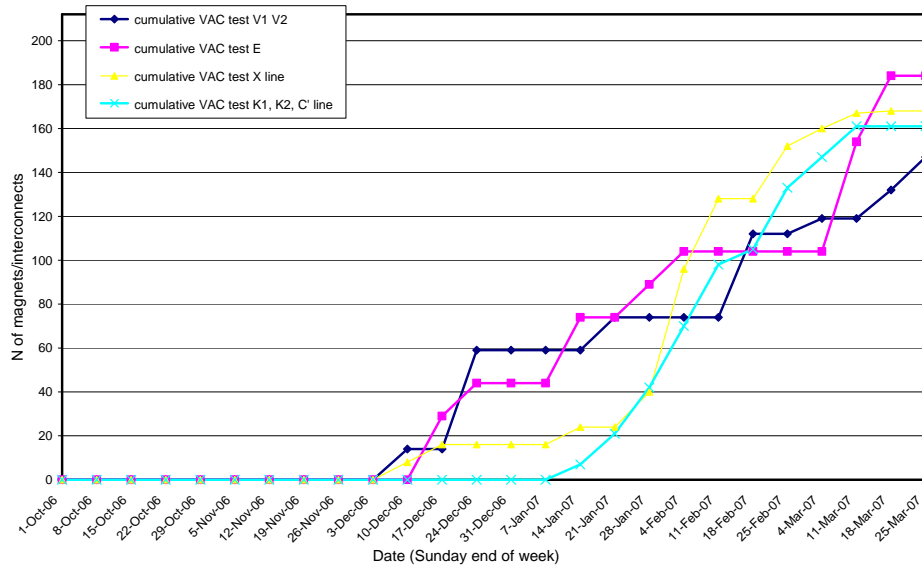


Fig. 19: Status of the VAC tests in sector 5-6.