

LHC Machine Committee - 22 April, 2009

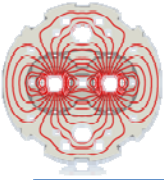
Sector 3-4 Repair Status

Francesco Bertinelli - TE/MSC
(10 minutes)

On behalf of - and with several contributions from - surface and IC teams

Recent status reports:

- LMC Information Meeting 8 April
- LMC 15 April: Connection Cryostats (J.P. Tock)
- MMM and TEMB 20 April

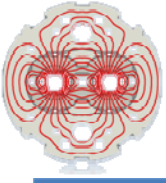


Surface News Week 16/2009

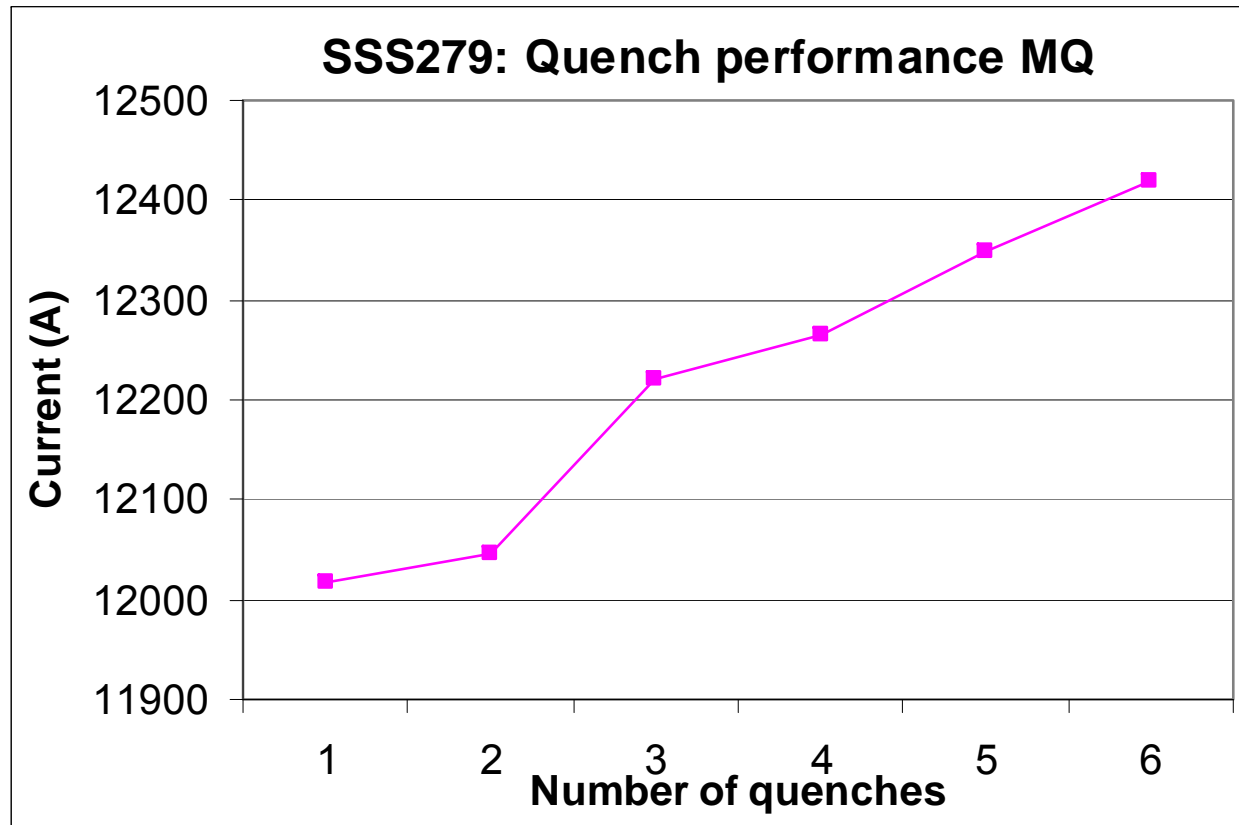
	End activity week 13 - 2009		End activity week 14 - 2009	
	Magnets	Quantity	Magnets	Quantity
Cryostating		0		0
Cold testing	SSS219-(2445=spares)	2	3383	1
Stripping	2035-2433-2437-2438-SSS208-SSS219	6		0
Fiducialization	1092-2108-2433-2438-SSS208	5	1071-1099-2035-2437-SSS219	5
Beam screen integration	1092-2108-2192-SSS225-SSS364	5	2035-2433-2438-2443-SSS208-SSS227	6
Tunnel preparation	2441-2103-SSS195-SSS203-SSS225-SSS364	6	1092-2108-2192-2443-SSS208-SSS227	6
Installation (=pose)	2103-SSS195-SSS203-SSS225-SSS364	5	2108-2192-2441-2443-SSS208-SSS227	6
	End activity week 15 - 2009		End activity week 16 - 2010	
	Magnets	Quantity	Magnets	Quantity
Cryostating	SSS279-SSS344	2		0
Cold testing		0	SSS344	1
Stripping	3383	1		0
Fiducialization	3383	1		0
Beam screen integration	1071-1099-2437-SSS219	4		0
Tunnel preparation	1099-2035-2433-2438-SSS219	5	1071-2437-3383	3
Installation (=pose)	1092-1099-2035-2433-2438-SSS219	6	1071-2437-3383	3

- MB3383 last dipole installed (A33R3)
- SSS344 ready mid W18 (back in SMI2 since last Friday)
- SSS279: cold testing finished, back in SMI2 this afternoon (needs ~8 working days)

Courtesy A. Russo

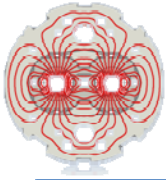


SSS279: MQ quench performance



- then stopped training
- also: correctors OK (problem was on current leads)

Courtesy M. Bajko, O. Dunkel



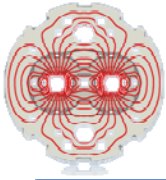
Tunnel News 3-4 Week 17/2009

	W bellows		PIMs cut		PIMs welded		BB disconnected	BB soldered
	fully opened	partial opening	V1	V2	V1	V2	M1, M2, M3	M1, M2, M3
Within Zone-D (Q19R3 to Q33R3 included)	57		55	57	38	38	57	38
Outside D-zone (replace all QQBI PIMs, cleaning soot and MLI)								
Towards Point 3	35		15	30	0	0	1	0
Towards Point 4	31		29	29	19	19	0	0
Outside D-zone (for DN200 work only)								
Towards Point 3		7						
Towards Point 4		51						
Total done/ongoing		181	99	116	57	57	58	38
		85%	47%	55%			27%	
Total present		212	212	212			212	

	M cut	M welded
	M1, M2, M3	M1, M2, M3
Within Zone-D (Q19R3 to Q33R3 included)	57	3
Outside D-zone (replace all QQBI PIMs, cleaning soot and MLI)		
Towards Point 3	1	0
Towards Point 4	2	0
Outside D-zone (for DN200 work only)		
Towards Point 3		
Towards Point 4		
Total done/ongoing	60	3
	28%	
Total present	212	

N-lines	
removed	installed
13	4
0	0
0	0
13	
28%	
46	

jumpers Z and lines
7
0
0
7
25%
28



Tunnel News 3-4 Week 17/2009

IC	BR	SP	V	E	Vc	C'	Y	X	Pq	M	N-line
QBQJ.19R3											
QQBI.19R3											
QBBI.A20R3											
QBBI.B20R3											
QBQJ.20R3											
QQBI.20R3											
QBBI.A21R3											
QBBI.B21R3											
QBQJ.21R3											
QQBI.21R3											
QBBI.A22R3											
QBBI.B22R3											
QBQJ.22R3											
QQBI.22R3											
QBBI.A23R3											
QBBI.B23R3											
QBQJ.23R3											
QQBI.23R3											
QBBI.A24R3											
QBBI.B24R3											
QBQJ.24R3											
QQBI.24R3											
QBBI.A25R3											
QBBI.B25R3											
QBQJ.25R3											
QQBI.25R3											
QBBI.A26R3											
QBBI.B26R3											
QBQJ.26R3											
QQBI.26R3											
QBBI.A27R3											
QBBI.B27R3											
QBQJ.27R3											
QQBI.27R3											
QBBI.A28R3											
QBBI.B28R3											

Damaged spool
Cut strands

To measure M3
No V1
No V1
No V1

V1 manual wel

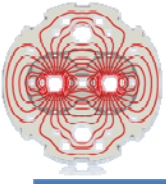
Resistance M3

V1 damaged flange GAP
V1 damaged flange

M3 flange damaged

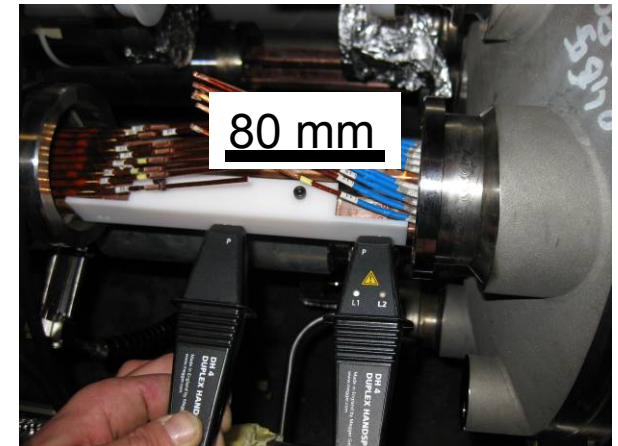
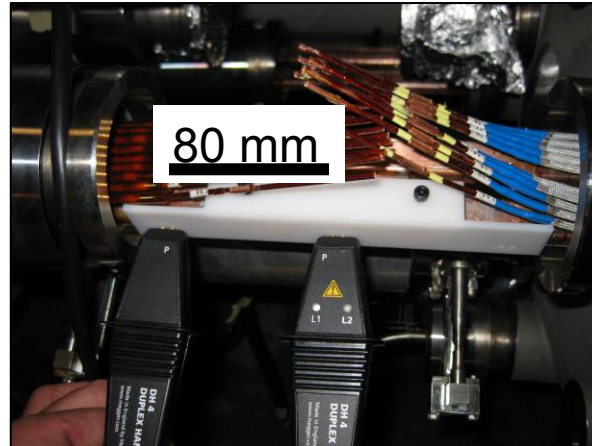
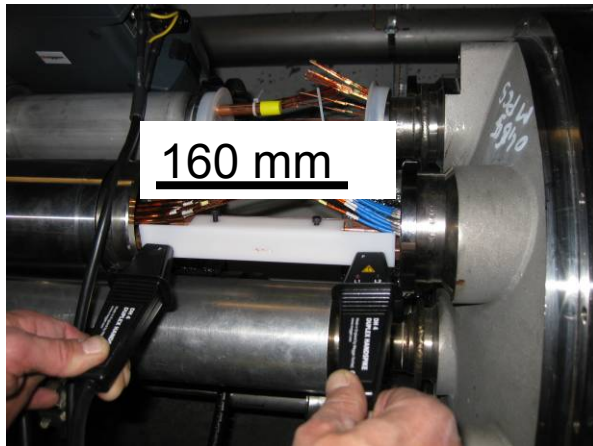
	Brazing	Spool	V	E	M
Week 13	8	6	7	8	0
Week 14	9	7	10	11	3
Week 15	5	4	2	1	0
Week 16	5	1	7	7	0
Week 17	3	8	3	8	3

- Unblocked situation with electrical NC
 - all available PAQ tests done this week
 - leaves 2 (missing SSS) and 2 (need for special US machine returned this week from Mecasonic)
- Electrical connections QC spotted developing problem with US welding machines for spools

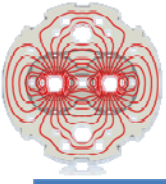


13kA splices Megger measurements

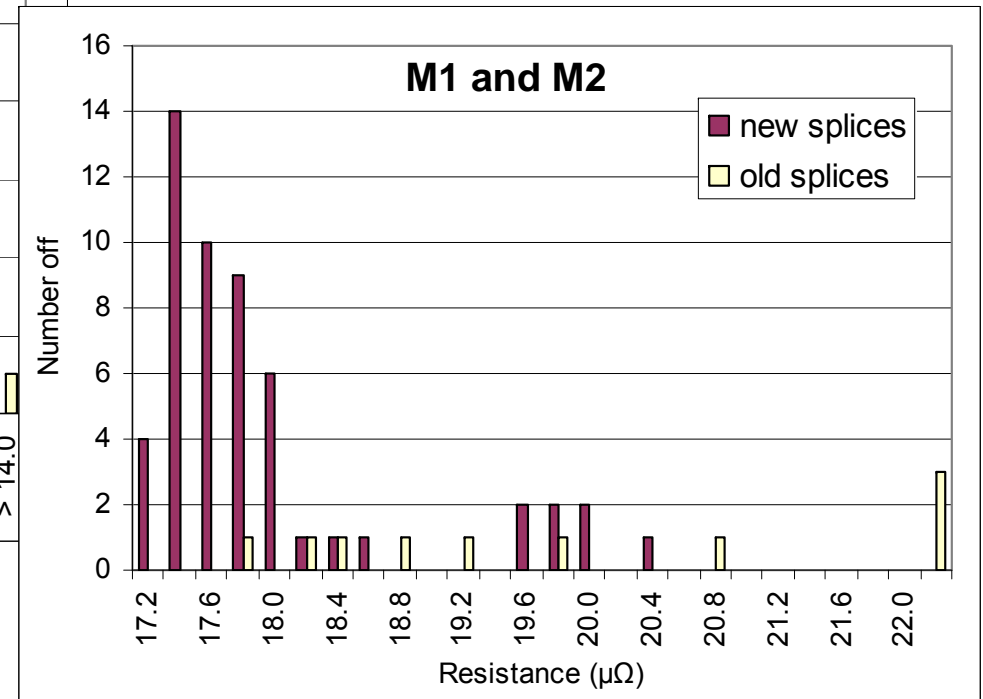
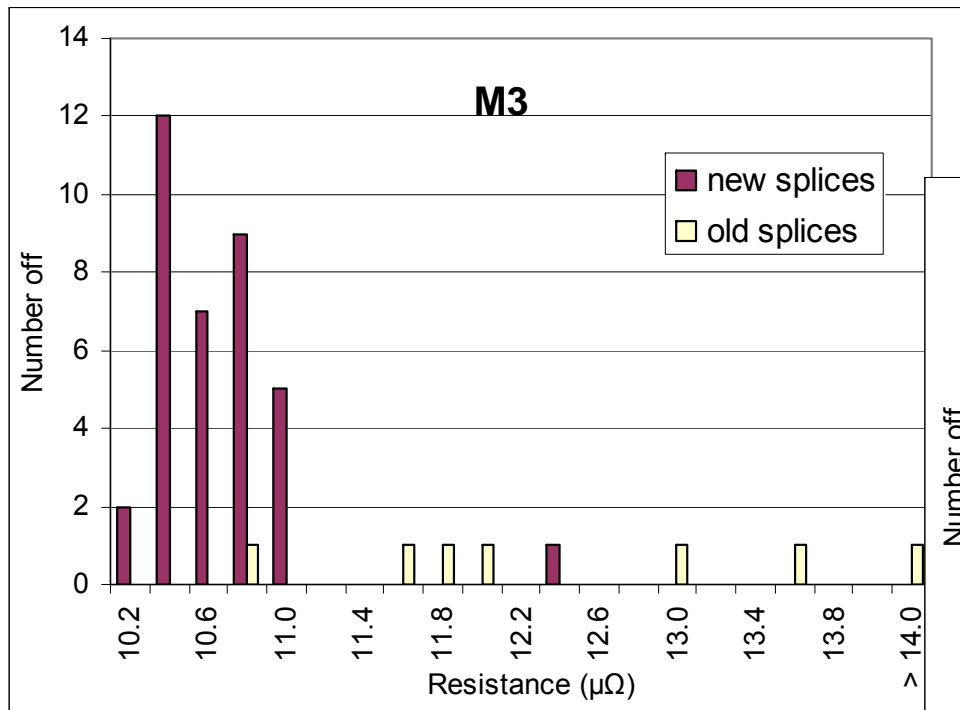
- Room temperature splice resistance measurement done as introduced by TE/MPE.
- Because of the short distance between current source and voltage taps only comparative measurements are possible with the Megger DLR 010.
- Distance between voltage taps 160 mm and 80 mm for total splice and one contact resistance measurement, respectively. Each new result is average value obtained from 3 measurements.
- Dedicated tool has been provided by H. Prin for keeping correct distance between voltage taps.
- Voltage taps always on the side of the splice.



Courtesy C. Scheuerlein

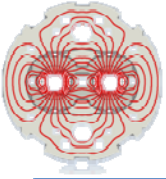


13kA splices Megger results



- Systematic measurements of available splices started W17
- Jig ready

Courtesy C. Scheuerlein, N. Catalan, G. D'Angelo, G. Trachez



5-6 & 1-2 W Closures

3 VACsectors delivered W13

19R5 & 31R5 : OK ; under vacuum

23 R5 : one acceptable leak but back to Pa for investigation on
SSS BB

3 VACsectors delivered W14

15R5 & 27R5 : OK

15L6 : under test

4 VACsectors delivered W15

31L6, 27L6, 23L6, 19L6: en test

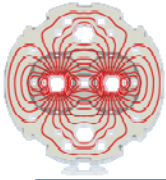
3 to 4 VACsectors delivered W16

11 R5, 11L6 : Delivered

19R1, 23R1 : to be confirmed

- Coactivity difficulties (lost time) between VAC teams and cabling teams
- coordination meeting last Monday (EN-EL, MSC, VSC)

Courtesy JP Tock



Pressure relief DN200 News

DN200 STATUS (W16)

Week	Total	Sector 1-2	Sector 3-4	Sector 5-6	Sector 6-7	Remarks
6	2		2			Surface
7	11		9			Surface
8	34	9	11	3		Surface & Tunnel
9	82	20	16	12		Surface & Tunnel
10	167	34	27	24		Surface & Tunnel
11	283	36	10	44	26	
12	378			68	27	
13	439	4		17	40	
14	495				56	
15	574	44	16		19	
16	630	21	35			
17	672		42			
SUM		168	168	168	168	

Courtesy JC. Perez