

Cryomagnets Interconnections

Consolidation of sector 4-5

Connection Cryostats

Plug-In Modules Photometer

Overview - Status

SC-RP samples

Quick interconnection overview
 Mock-up



(Inter)Connection Cryostats Status

Sector	Repair of ICCs
1-2	Completed
2-3	Completed
3-4	Completed
4-5	Completed
	At next warm-up - 3 units -
5-6	Spare units to be built ?
6-7	Completed
7-8	Completed
8-1	Completed





2/11

ICC 09/05/2008



Consolidation of sector 4-5 PIMs





Consolidation of sector 4-5 PIMs

Conclusions

+ 12 failed PIMs in the sector

- In 7-8 : 16 failures but 8 (7) expected (Wrong type of PIM installed)

Extrapolated to a whole sector : 9.6 (10.8) so similar failure rate

- 8 PIMs with 1 or 2 buckled fingers / 4 PIMs with 6 to 9 buckled PIMs

+ Only QQBI-type PIMs failed

- + One "false" defect detected by ball test (12R4) so preferred direction
- + 3 IC with 2 failed PIMs (#6) / 6 ICs with 1 failed PIM (#6)

Parameters determining failure are coming both from IC "geometry" and PIM characteristics

+ 30 [of which 10 in 6 ICs for plastic inspection/removal] PIMs replaced All in QQBI ICs 28 % of this type of PIMs has been changed and are now conforming ones

-+ Post-mortem analysis of PIMs in correlation with geometric measurements needs to be done

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Consolidation of sector 4-5

	<u>Sector 4-</u>	5 Consolidation	<u>Schedule</u>	Remark
1	Plug-in modules	All IC reclosed	Critical	PIM WG 8/5/2008
2	Photometer test	Completed	OK	Positive results / To be analysed
3	Y lines	X lines leak tested / under closure	OK	Price reduction / Free staff availability
4	Helium guards	All repaired / under leak test	OK	In parallel with insulation vacuum test
5	Leaks	Repaired / under leak test	OK	
6	Triplet 5L	Completed / Pressure test OK	Critical	Final leak test next week
7	Q5R4	Clsoed	OK	Radial motion not yet understood
8	Connection Cryostats	Completed / under test	OK	
9	CC splices	Not critical	Done	
10	DFBs cables	Not to be done	NA	

Completed according to the schedule

Thanks to knowledge / experience

Availability of trained / competent staff (CERN, FSU, Contractor)

In the arc, 7/14 sectors are leak tight ; other ones are under test

33 ICs have been opened and reclosed

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Insertion of Material Samples for the Experimental Verification of Induced Radioactivity L Ulrici/ L Nicolas SC/RP

Engineering Change Request LHC-LI-EC-0001: Comments in new version ; Approved ; available in EDMS

In the interconnections (# 22) :

A set of samples :

- Non magnetic collars
- Stainless steel
- SC cable
- Polyimide

ICC

09/05/2008







Quick IC overview

<u>Sector</u>	On-going
1-2	Flushing (Shorts ?)
2-3	Cool-down
3-4	Cool-down
4-5	Leak test / 2 W bellows
5-6	Cold
6-7	Cool-down
7-8	Cool-down
8-1	Cool-down

No IC open : 😇



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Mock-up @ SMI2





<u>30th of april 2008 @ 11:16 am :</u> All the LHC interconnections are closed at the same time for the first time !

