

# LHC Arc Interconnections: monthly update

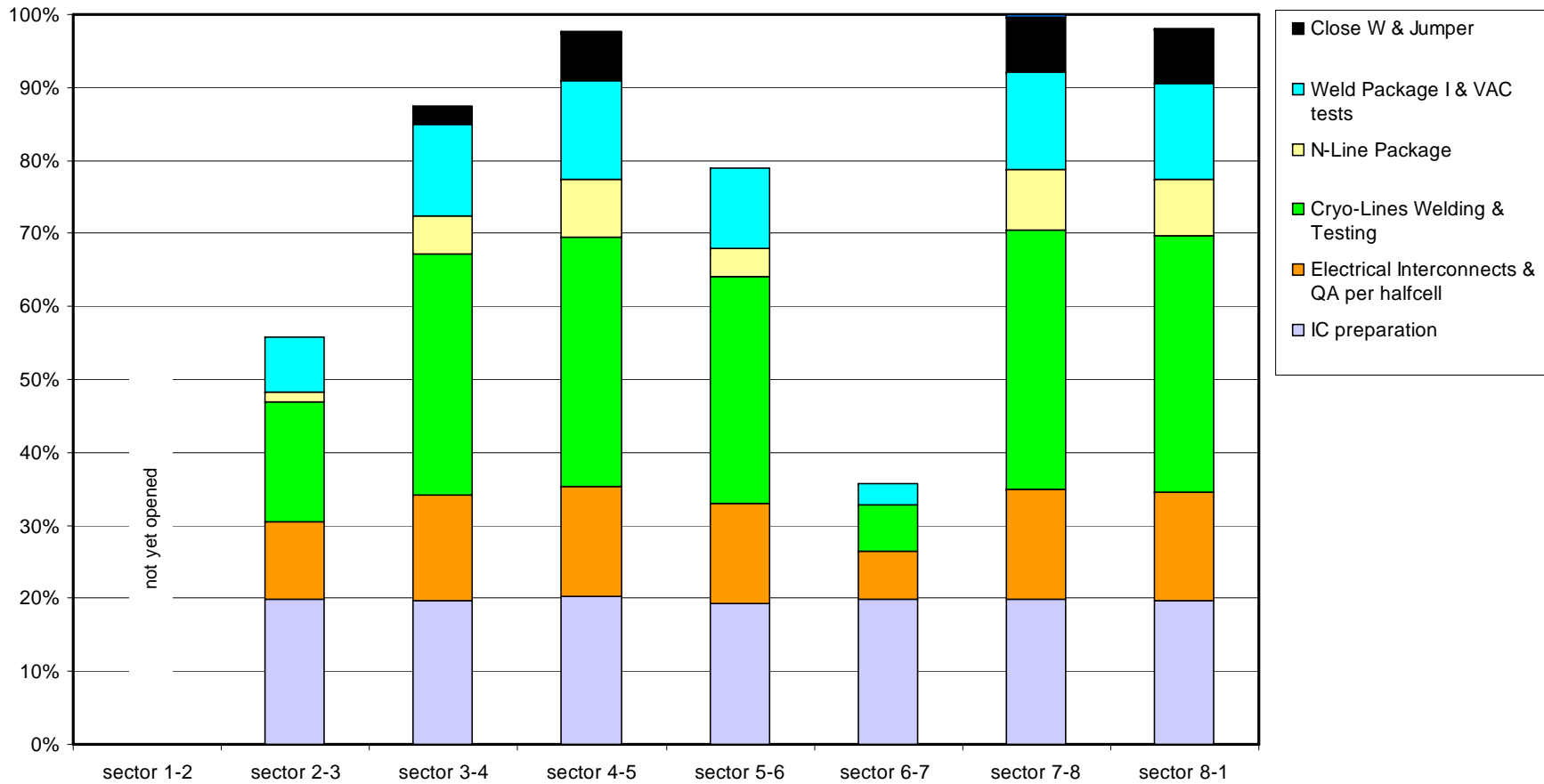
F. Bertinelli / AT-MCS

(on behalf of IC Team)

- **Progress reporting, productivity**
- **SSS500 repair**
- **Closing of 4-5, 8-1, and 3-4**
- **some current issues**
- **one technical example**

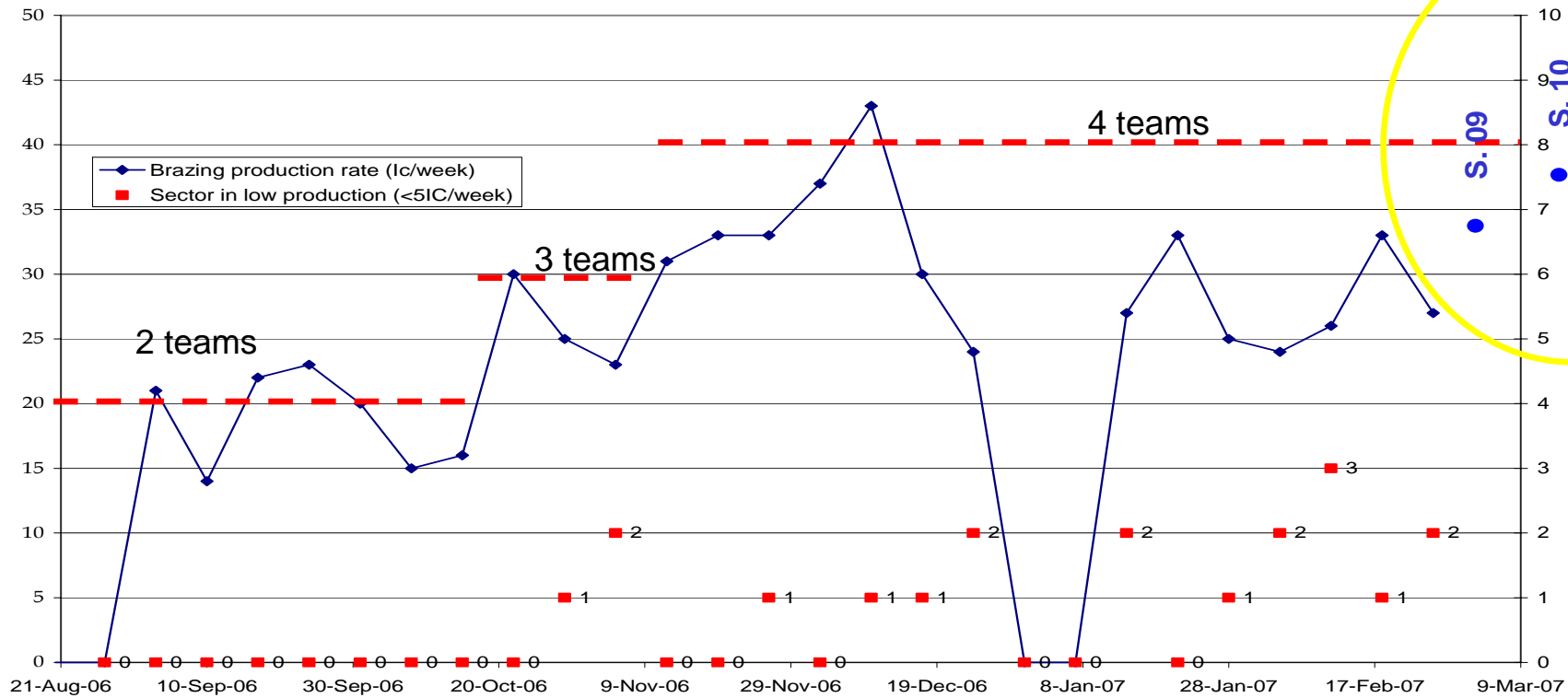
# Weekly Report: from C. Vollinger

General Advancement of Interconnects per Sector 24-Mar-2007



from Weekly IC Report: C. Vollinger

# Weekly productivity: "management of holes"



from P. Fessia, week 08/2007

end 4-5	end 4-5		tail 4-5	tail 4-5	tail 4-5	end 3-4		tail 3-4	tail 3-4	tail 4-5	tail 4-5	end 5-6	tail 3-4
	start 5-6					start 2-3		tail 8-1		tail 3-4	start 6-7	end 5-6	
										tail 8-1			



Week 12

19-03-07 → 24-03-07

	Sector 2-3		Sector 3-4		Sector 4-5		Sector 5-6		Sector 6-7		Sector 8-1		Total	
	WY1	Total	WY1	Total	WY1	Total	WY1	Total	WY1	Total	WY1	Total		
WP1a	Welding of plug-in modules	5	153	0	200	0	212	0	192	2	4	0	210	7
	Welding of line E expansion joint	34	178	1	210	0	212	0	195	43	166	0	212	78
	Soldering of main bus bars	22	154	0	206	0	211	0	196	20	100	0	211	42
	Soldering of Y	33	199	0	192	0	210	0	201	23	114	0	194	56
	Welding of line C' sleeves	0	159	0	193	0	195	0	174	50	116	0	195	50
	Welding of line X	40	127	0	192	0	210	0	201	0	96	0	194	40
	Ultrasonic welding of spool pieces	19	145	0	206	0	210	0	195	13	85	0	210	32
WP1b	Main bus bars insulation	20	147	0	206	0	210	0	194	20	99	0	211	40
	Spacer installation	10	118	0	200	1	208	0	195	8	74	0	205	17
WP1c	Welding of line M1/M2	0	73	12	176	5	205	2	162	0	0	0	205	19
	Welding of line M3	0	73	12	176	5	205	2	162	0	0	0	210	19
	Welding of K1, K2	0	73	0	152	0	157	0	146	0	0	0	157	0
	Welding of K Coil	0	25	0	27	0	27	0	23	0	8	0	26	0
WP2	Insert N	20	26	0	54	0	54	0	49	0	0	0	165	20
	Cabling N	0	17	0	47	0	46	0	44	0	0	0	52	0
	Tack Weld N sleeve Ø 71	0	57	0	152	0	156	0	141	0	0	0	156	0
	US weld N line	0	0	0	44	0	46	15	40	0	0	0	51	15
	Weld N sleeve Ø 71	0	0	0	132	9	156	15	93	0	0	0	147	24
	Insulate N	0	0	7	40	3	49	4	23	0	0	0	50	14
	M2N weld	0	0	12	24	4	48	2	16	0	0	0	45	18
	Weld N sleeve Ø 139	0	0	12	24	3	49	0	5	0	0	0	49	15
WP3	Instrumentation	0	0	0	24	3	46	0	0	0	0	5	47	8
	Thermal shield MLI	0	0	0	77	0	176	0	0	0	0	35	193	35
	Close W	0	0	0	77	0	176	0	0	0	0	35	193	35

# IEG « consolidated » reporting

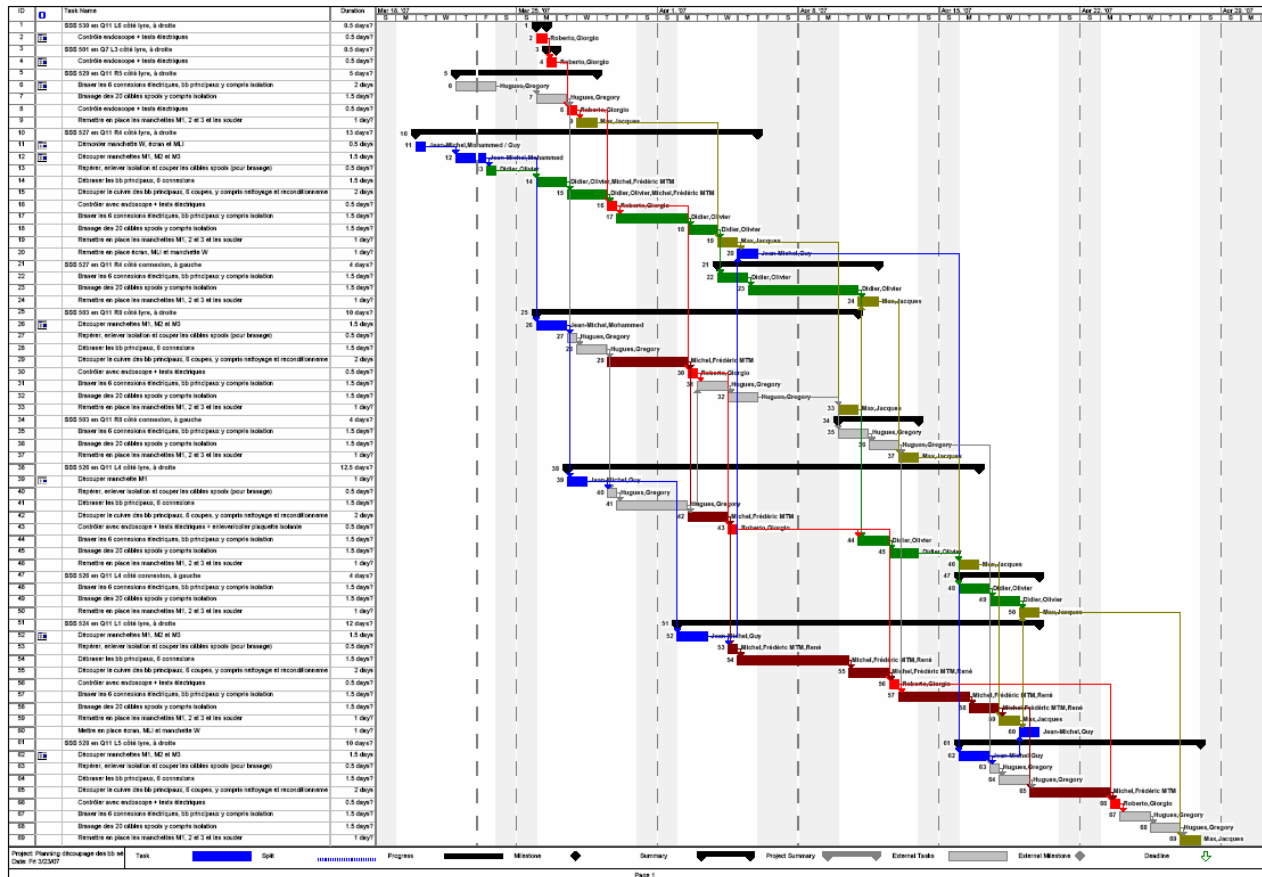


*Week 12*

19-03-07 → 24-03-07

		Sector 3-4		Sector 4-5		Sector 8-1		Total
		W11	Total	W11	Total	W11	Total	
<b>WP5</b>	Welding of line CY	6	20	0	28	0	27	6
	Welding of line XB	6	19	0	26	0	26	6
	Welding of line CC'	5	21	0	28	0	28	5
	Welding of line KD1	5	21	0	28	0	28	5
	Welding of line KD2	5	21	0	28	0	28	5
	Welding of line LD2	3	10	0	12	0	11	3
	Welding of line LD1	6	20	0	28	0	28	6
	Thermal shield MLI	5	6	0	28	0	28	5
	Close Z	6	6	0	28	0	26	6

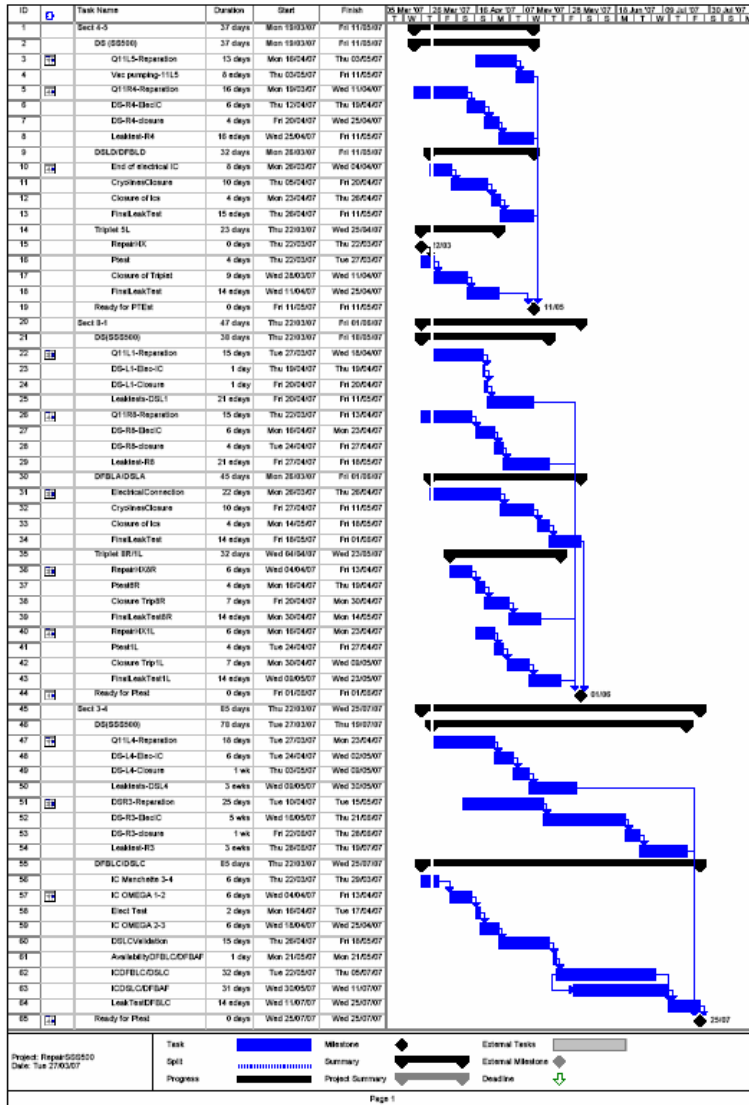
# SSS500: detailed repair planning



from F. Savary

- work sequence discussed EEWG, MPP
- additional personnel involved (thanks to A. Siemko, V. Parma), but requires time to be integrated

# Sector planning: arc and LSS



Considers:

- SSS500 repair
- triplet repair
- DFBL/DSL

Assumes:

- SSS500: no systematic electrical repair foreseen
- SS500: ad-hoc electrical testing
- no reopening of last vacuum sectors
- no interference with 5-6 (risk for 3-4)
- no interference with WRL

Ready for pressure test:

- 4-5: 11 May
- 8-1: 1 June
- 3-4: 25 July.

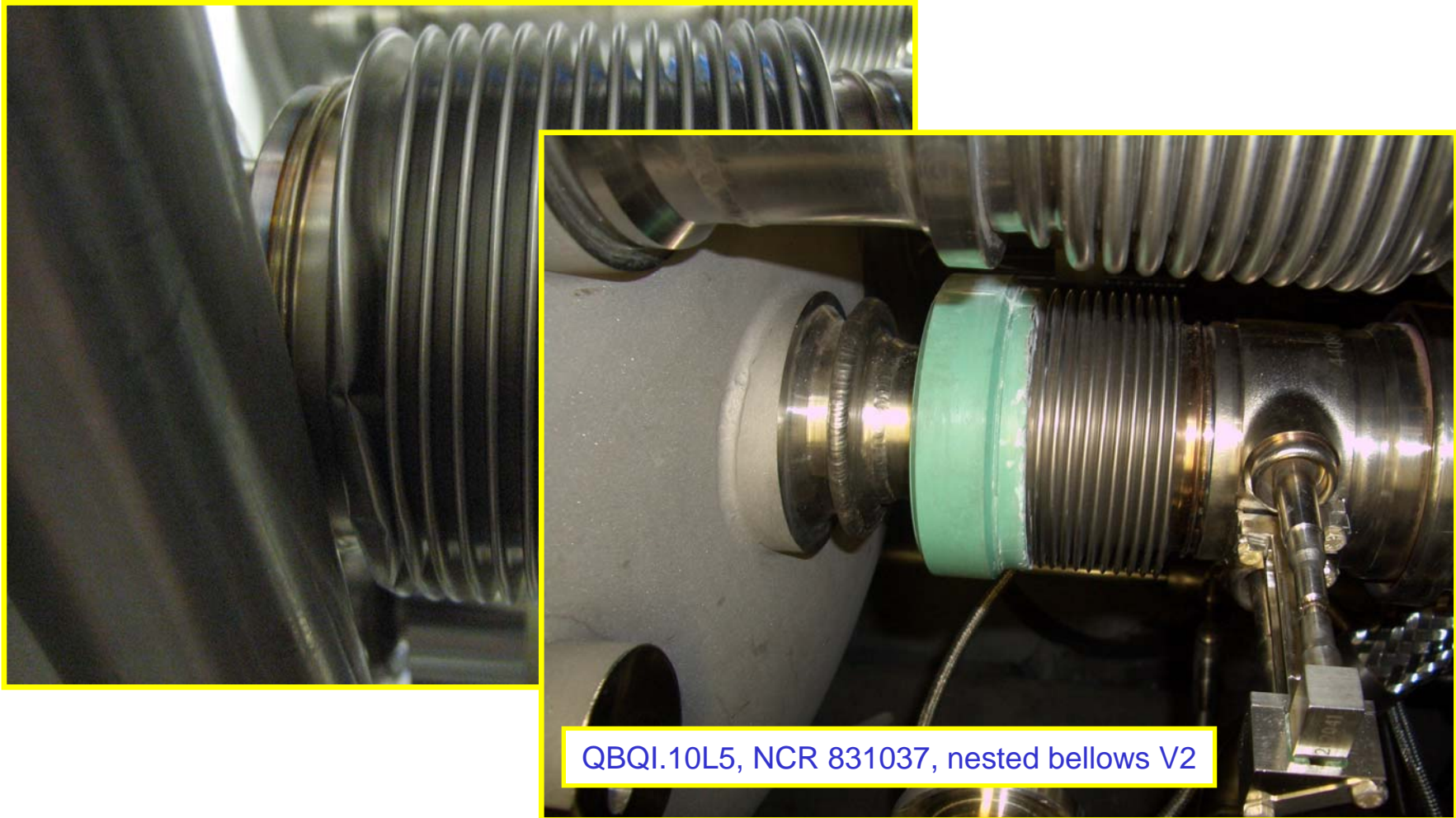
from J.P. Tock

# IC some current issues

- Components: several just-in-time, but no major show stoppers
  - « 15 March » PIMs arrived 26 March, to finish 2-3 and start 6-7
  - kapton sheets for PIM welding
  - jumper and C' sleeves
  - E bellows ordered
  - M sleeves ordered
- IEG work on Fridays and compensation days: access procedure OK
- Coactivity with transport: specifically transport of triplet repair tubes through 1-2 to 8-1: use Point 1 or 8 access instead please
- Quality Control: recent acceleration of efforts, additional audits by CERN and IEG with positive visible results
- Contractual discussions with IEG:
  - CODIR on 27 February focussed on quality: next CODIR to assess progress tomorrow 29 March
  - negotiations on cost of sector end activities



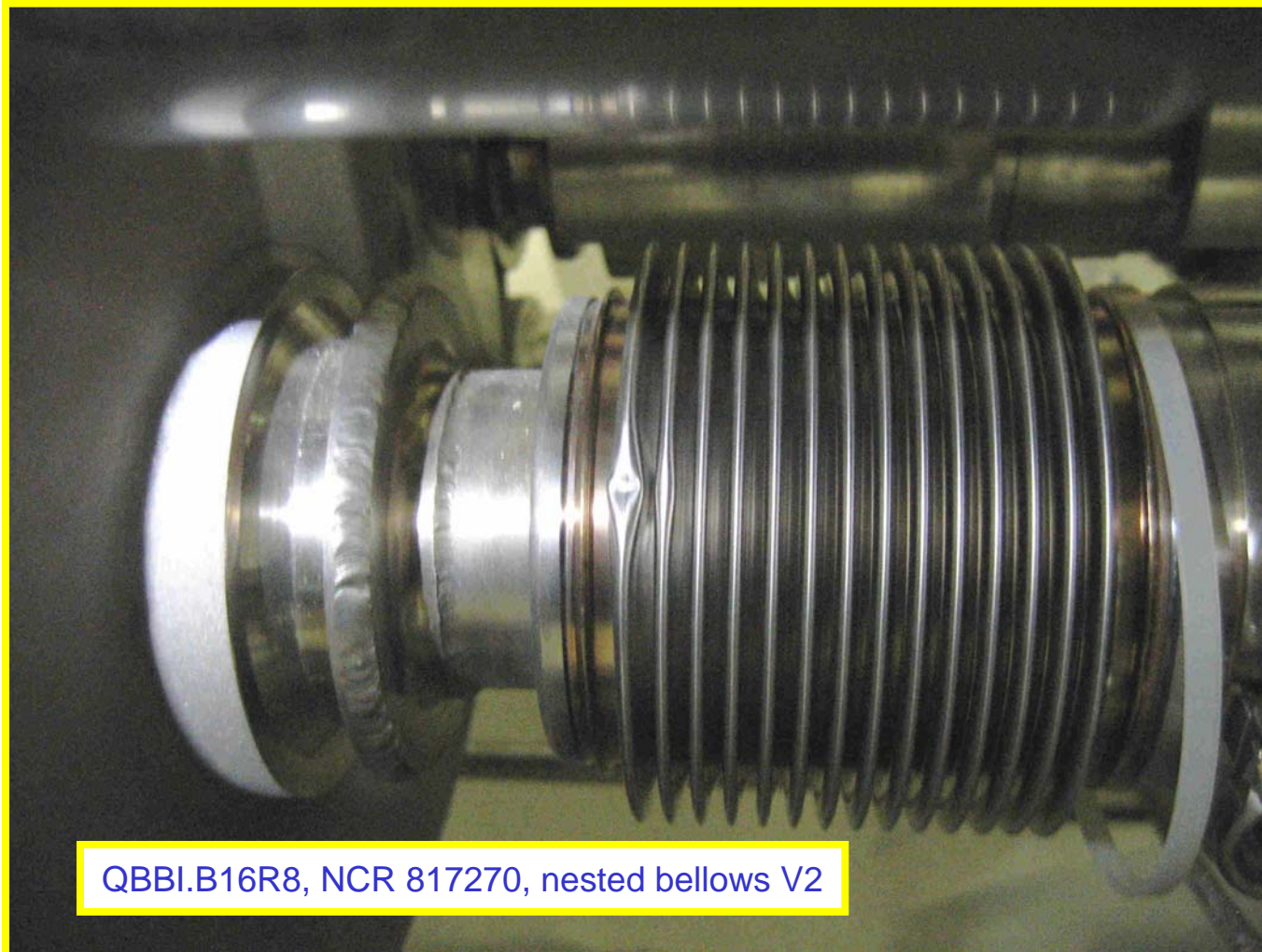
# In-situ bellows repair with resin



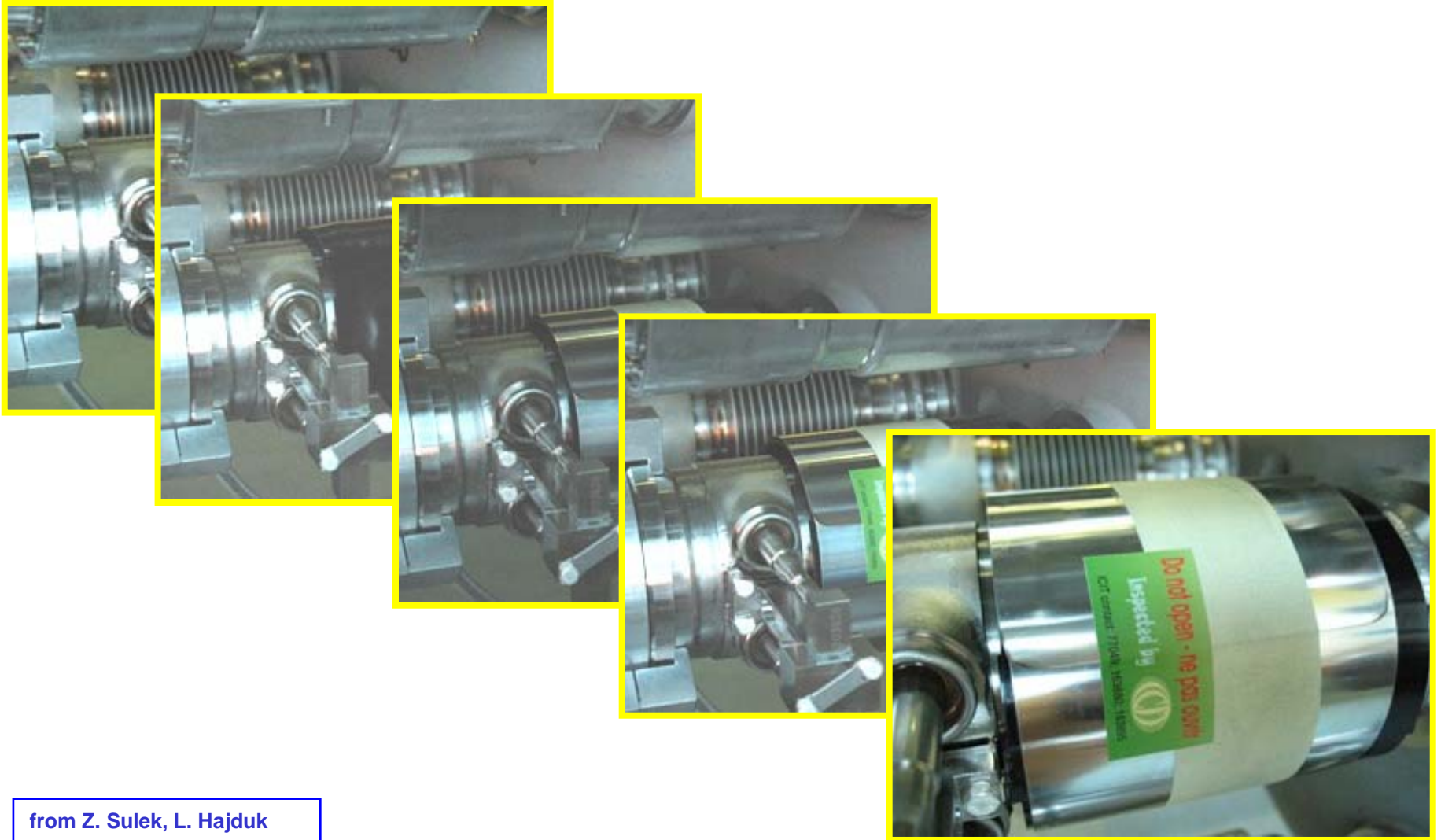
QBQI.10L5, NCR 831037, nested bellows V2

from J.F. Ecarnot, M. Bajko, M. Duret

# Bellows repair- ad-hoc approach



# ICIT and IEG: inspection and protection



from Z. Sulek, L. Hajduk