

Report: 22-06-2020

Activity: SPS aC coating + I.R.

Name Wil Vollenberg (on behalf of aC coating and I.R. team)

Meeting



LS2



Overall view

Finished : ARC 5-, 4-, 3+, 3- , 2+ , 5+, 6- , 6+ , 1-, 1+
In hands of VSC-BVO

Ongoing:

ARC 1+ => finished => see next slides

ARC 2- => finishing => see next slides

Activities done



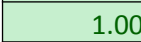


ARC 1+ aC coating, I.R. and handling in SPS

Position	access	I.R. BPH	I.R. 1	Coating	I.R. 2	SSS back	alignment	Vac. Conn.	Q.C. RF	I.P. connect	vacuum
QF 12010	4	4	4	0.98	w 7	week 9	w 11	week 21	N.A.	week 22	w 23
QF 12210	4	4	3	0.99	w 7	week 9	w 9- 10	week 21	week 22	week 22	w 23
QF 12410	4	4	3	0.99	w 7	week 9	w 10	week 21	week 22	week 22	w 24
QF 12610	3	4	4	0.99	w 7	week 9	w 10	week 21	week 22	week 22	w 24
QF 12810	4	4	4	0.97	w 7	week 9	w 10	week 21	week 22	week 22	w 24
QF 13010	3	4	4	0.96	w 7	week 9	w 10	week 21	week 22	week 22	w 24
QF 13210	3	4	4	0.96	w 7	week 9	w 10	week 21	week 22	week 22	w 24
QF 13410	3	4	4	0.95	w 7	week 9	w 10	week 21	week 22	week 22	w 24
QF 20010	3	4	4	0.99	w 7	week 9	w 11	week 21	week 22	week 22	w 24
QF 11610			2	0.97	w 7	week 9	w 11	BVO	no	BVO	BVO
QF 11810				w 3	w 7	week 9	w 10	BVO	no	BVO	BVO

 = Cern shut down

Start up



	prepared for coating
	done / coated
	coated and SEY measured
	ongoing
	planned






Activities done

ARC 2- aC coating and I.R. in 867

SSS	out	I.R. 1	Coating		I.R. 2	SSS back
LSF.20205	w 9	w 10	0.97		w 11 + Q.C.	week 23
LOF.20402	w 9	w 10	0.96		Done	week 23
LSE.20602	w 9	w 10	0.96		Done	week 23
LSF.20805	w 9	w 10	0.98		w 11 + Q.C.	week 23
MPSH.21202 & LSF.21205	w 9	w 10	0.92		Done	week 23
VTTC.21401 / LSF.21405	w 9	w 10	0.92	0.91	Done Done	week 23
VTTB.11601	w 9	w 10	0.96		Done	with BVO

See previous slide

 = Cern shut down  Start up

	prepared for coating
	done / coated
	1.00 coated and SEY measured
	ongoing
	planned

Activities done / ongoing

ARC 2- aC coating and I.R. in SPS


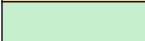
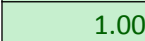
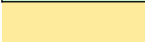

Position	access	I.R. BPH	I.R. 1	Coating	I.R. 2	SSS back	alignment	Vac. Conn.	Q.C. RF	I.P. conn.	VAC
QF 20210	w 9	w 10	w 9	0.97	Week 22	W 23	week 24	week 26	w 26	w 27	w 27-28
QF 20410	w 9	w 10	w 9	0.98	Week 22	W 23	week 24	week 26	w 26	w 27	w 27-28
QF 20610	w 9	w 10	w 9	0.96	Week 22	W 23	week 24	week 26	w 26	w 27	w 27-28
QF 20810	w 9	w 10	w 10	0.96	Week 22	W 23	week 24	week 26	w 26	w 27	w 27-28
QF 21010	w 9	w 10	w 10	0.97	Week 22	W 23	week 24	week 26	w 26	w 27	w 27-28
QF 21210	w 9	w 10	w 10	1.00	Week 22	W 23	week 24	week 26	w 26	w 27	w 27-28
QF 21410	w 9	w 10	w 10	0.92	Week 22	W 23	w 26 *	week 26	w 26	w 27	w 27-28
BPH 20203	w 9	w 22		no	y	W 23	week 24	week 26	w 26	w 27	w 27-28
BPH 20406	w 9	w 22		no	y	W 23	week 24	week 26	w 26	w 27	w 27-28

 = Cern shut down

Start up



* Vacuum chamber in QF.21410 correction in week 25: done

	prepared for coating
	done / coated
	coated and SEY measured
	ongoing
	planned

Activities in 181

Coating of new chambers

Week 12 : 2 coating runs done
 stored under static vacuum

Dismounted in week 19

SEY: 0.90 & 0.92

Handed over to BVO for installation in BA5

Resources distribution

SPS tunnel: 2 FSU (90 % BVO activities) + SCC staff

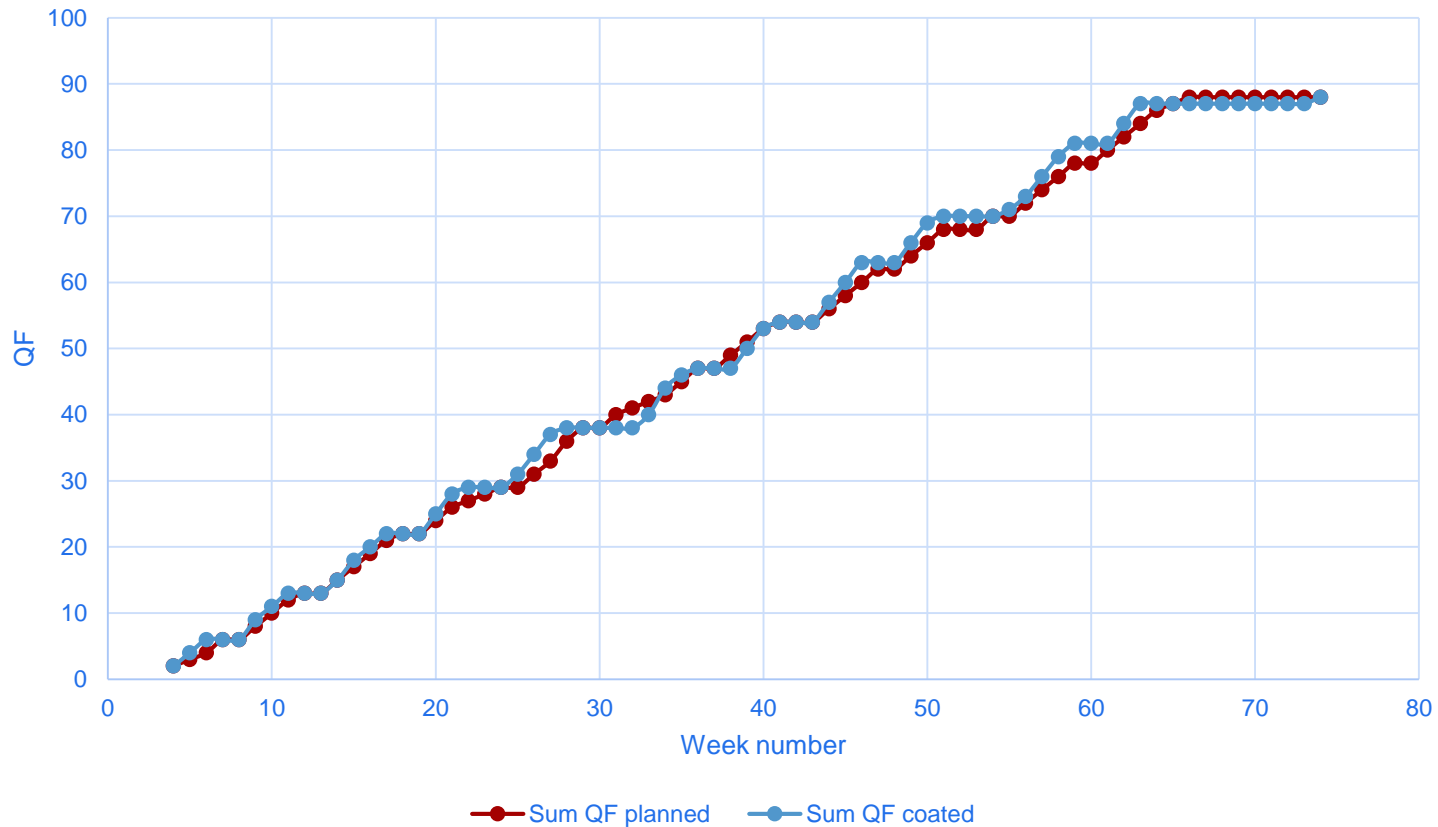
867: Maintenance & storage of equipment

FSU + SCC staff

181: Done

Dashboard and work evolution

Dashboard aC coating project + I.R.

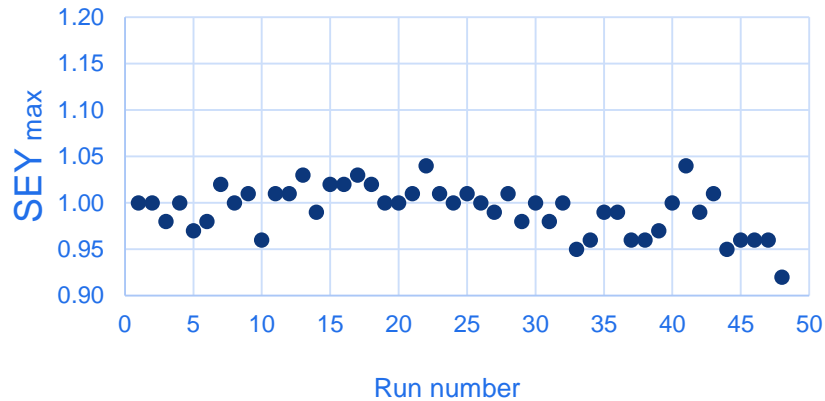


aC coating overview:

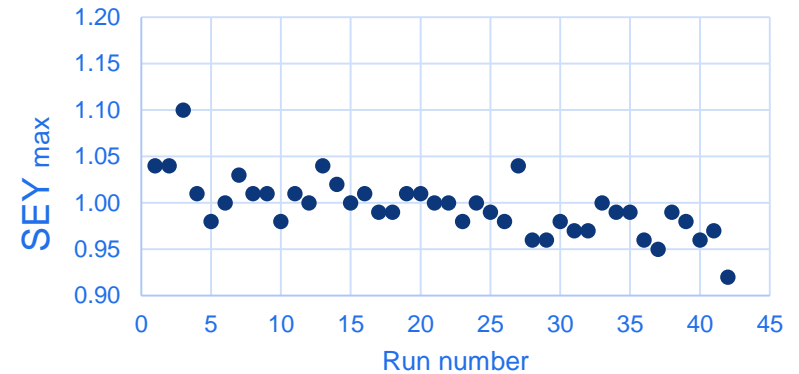
- In SPS: 88 QF magnets with total length of 294 meters (85 in SPS and 3 in 867)
- In 867: 96 coating runs:
 - 110 SSS QF elements with a total length of 104 meters
- In 181: 14 coating runs:
 - 29 Ø drift tubes (Ø 159 mm) with a total length of 80 m.

Quality control SEY; final version

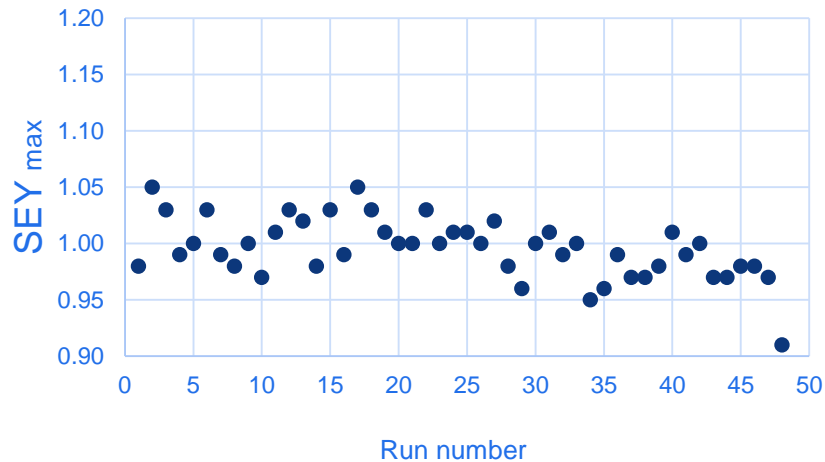
SEY_{max} 867 system 1



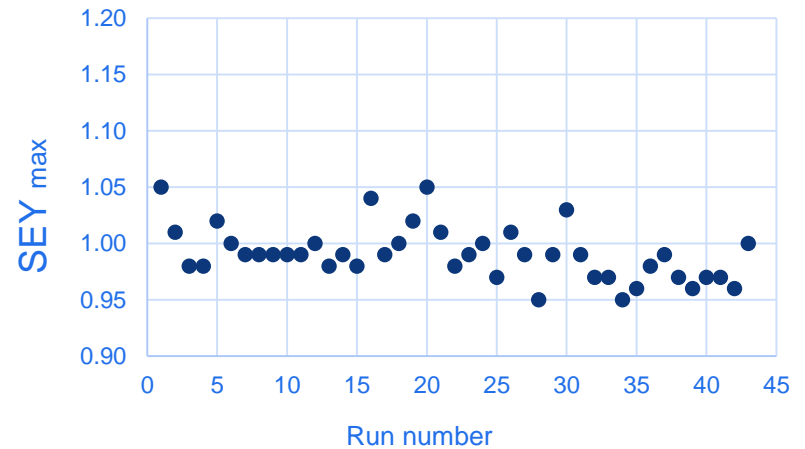
SEY_{max} Tunnel system 1



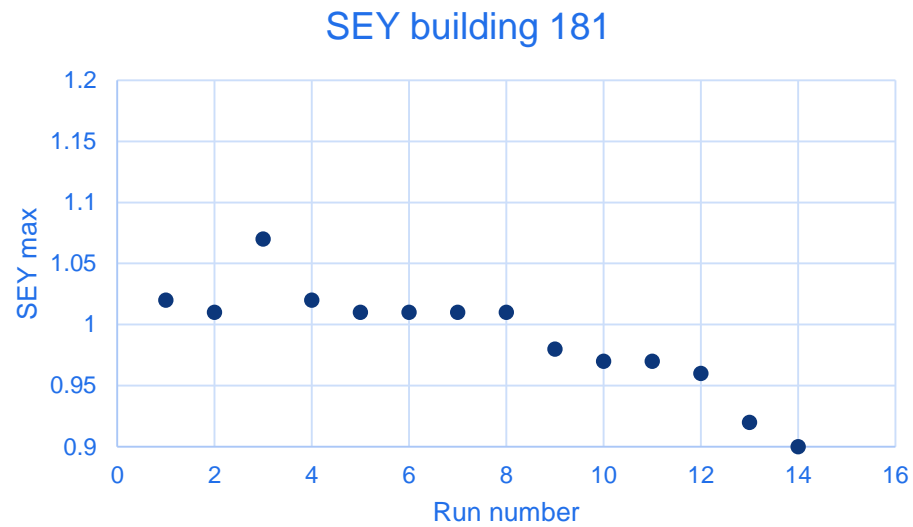
SEY_{max} 867- system 2



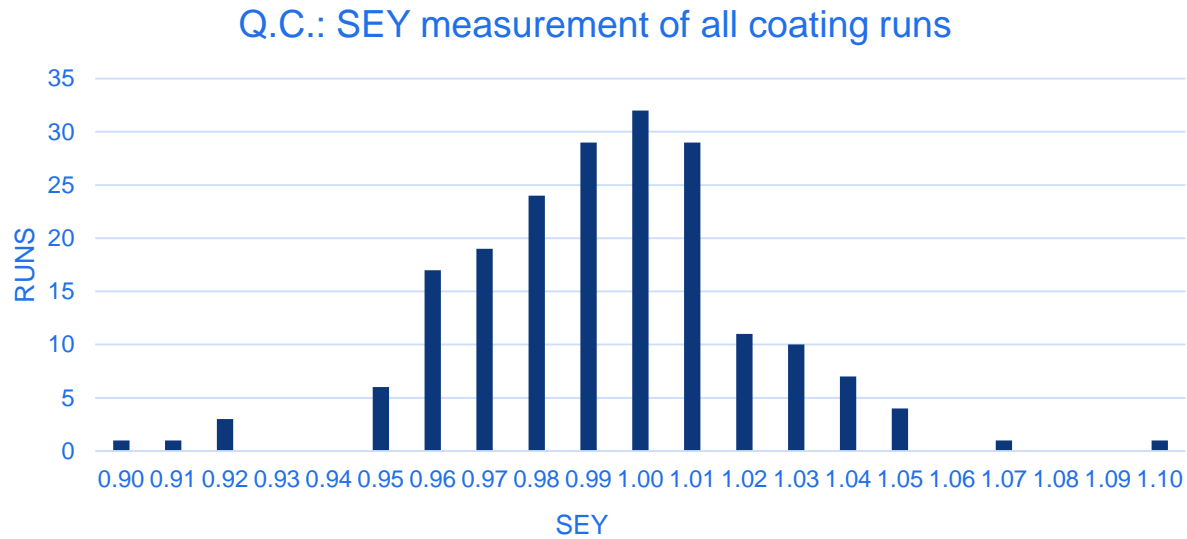
SEY_{max} Tunnel system 2



Quality control SEY, final version

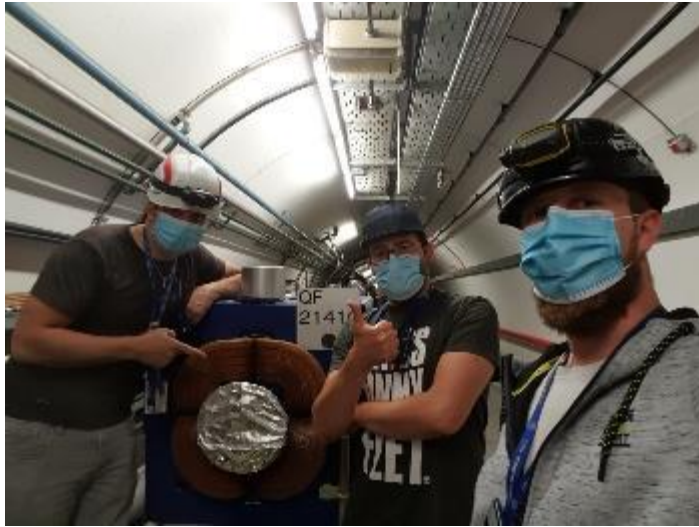


Quality control SEY, histogram



Ongoing activities:

- EDMS documenting of coating processes: done
- SPS aC & IR dashboard: almost complete
- Extraction from dashboard => MTF (\approx complete)
- EDMS linking to MTF (\approx complete)
- Technical notes (75 % finished)
- Paper
- Presentation (nov. 2020)



LS2: Last QF coated in SPS



LS2: Last SSS QF coated in 867

Thank you !



LS2

