IBC magnet status (after rewind and repairs) – July 3/2019

Old – as built, 2011

	Length (mm)	Inner radius (mm)	Outer radius (mm)	# layers	# Turns	Max A (Amps)	Location (mm)
		,				, , ,	
Transfer-UP	416.24	109.54	110.05	2	3102	17	[1069.68 to 1485.92]
Transfer-DN (1: upstream section)	95.22	41.33	41.83	2	745.5	17	[1497.19 to 1592.41]
Transfer-DN (2: downstream section)	305.84	38.15	38.66	2	2394.5	17	[1597.98 to 1903.82]
HD holding coil	400.0	35.66	36.68	4	6004.0	51	[1910.82 to 2310.82]

- Transfer-UP: 775 turns, in 2 layers, removed from original coil in Mar-Apr/19;
 2348 turns in two layers wound on top of original coil in June/19
- Transfer-UP (2: downstream section) has 3102 775 + 2348 = 4675 turns in 4 layers
 - Length = $\{(331-22)_L + (331-20)_R\}/2 = 310.0 \text{ mm}$
 - Location: downstream end @ Z =1485.92mm
 Upstream end @ Z =1485.92 310.0 = 1175.92 mm
- Transfer-UP (1: upstream section) has 1603 turns in 4 layers
 - $Z(downstream\ end) = Z(upstream\ end\ of\ Transfer-UP(2) {(336.5-331)_L + (336.0-331)_R}/2 = 1175.92 5.25 = 1170.67$
 - Z(upstream end) = 1170.67 { $(442-336.5)_L + (441-336)_R$ }/2 = 1065.42
 - Length = ${(442-336.5)_L + (441-336)_R}/2 = 105.25 \text{ mm}$

New - as built, June'19

Length (mm)	Inner radius	Outer radius	# layers	# Turns	design A	Location (mm)
	(mm)	(mm)			(Amps)	
105.3	109.54	110.56	4	1592.0	20	[1065.42 to 1170.67]
310.0	109.54	110.56	4	4675.0	20	[1175.92 to 1485.92]
95.22	41.33	41.83	2	745.5	20	[1497.19 to 1592.41]
305.84	38.15	38.66	2	2394.5	20	[1597.98 to 1903.82]
400.0	35.66	36.68	4	6004.0	59	[1910.82 to 2310.82]
	105.3 310.0 95.22 305.84	(mm) 105.3 109.54 310.0 109.54 95.22 41.33 305.84 38.15	(mm) (mm) 105.3 109.54 110.56 310.0 109.54 110.56 95.22 41.33 41.83 305.84 38.15 38.66	(mm) (mm) 105.3 109.54 110.56 4 310.0 109.54 110.56 4 95.22 41.33 41.83 2 305.84 38.15 38.66 2	(mm) (mm) 105.3 109.54 110.56 4 1592.0 310.0 109.54 110.56 4 4675.0 95.22 41.33 41.83 2 745.5 305.84 38.15 38.66 2 2394.5	(mm) (mm) (Amps) 105.3 109.54 110.56 4 1592.0 20 310.0 109.54 110.56 4 4675.0 20 95.22 41.33 41.83 2 745.5 20 305.84 38.15 38.66 2 2394.5 20

Dump solenoid	475.0	127.5	214.5	8	336	357	[2438.4 to 2913.4]
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