TS-SSC 91-023

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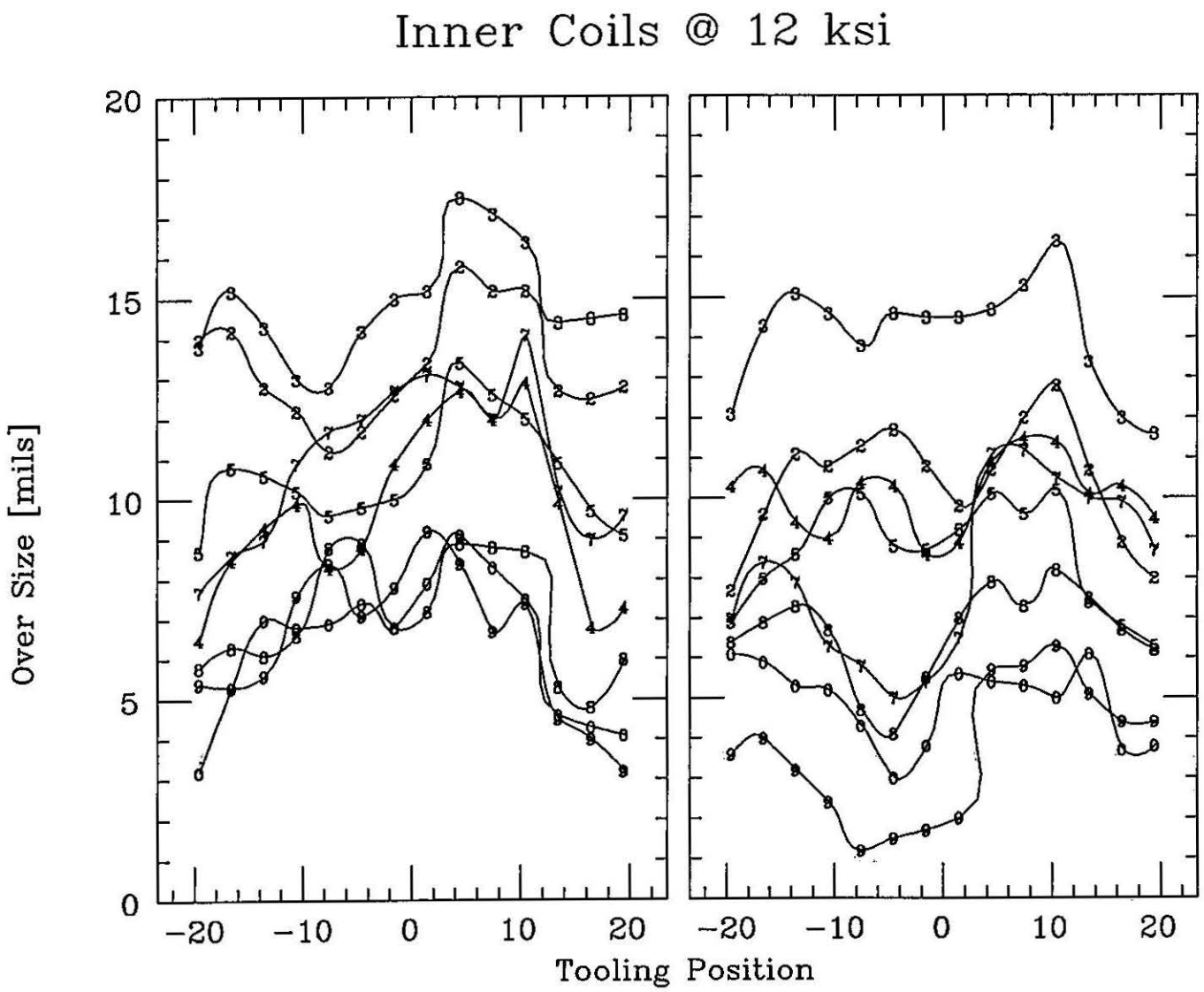
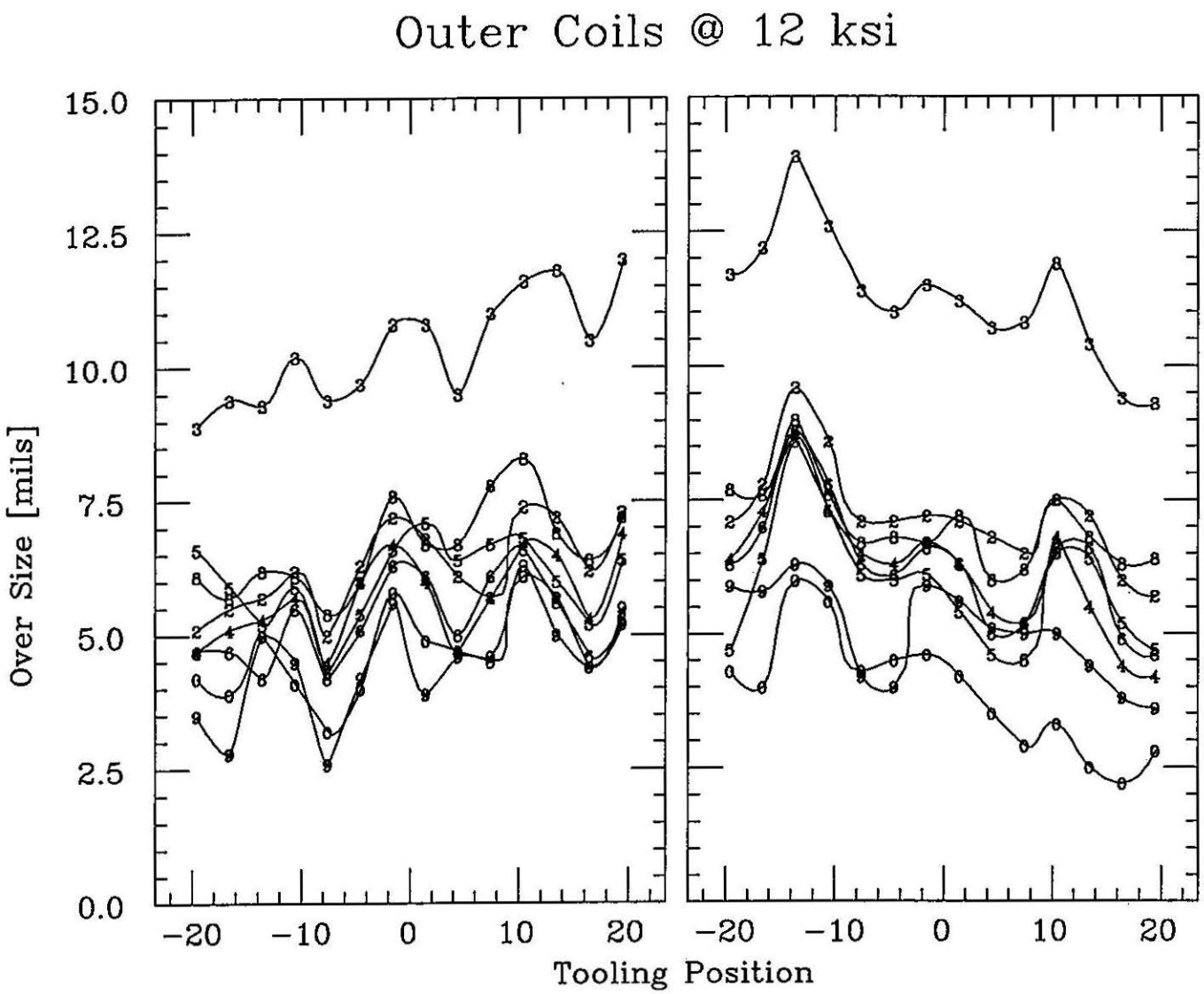
From: Masayoshi Wake
Subject: 50mm Coils

The first series of short 50mm dipole coils have different features accidentally or intentionally. They are summerized as follows. Since the main purpose of DSA323 is to reproduce the performance of DSA321, those coils which had considerably different characteristics due to curing experiments will not be used in DSA323 but kept for DSA234. Decision for the coil usage will be made after the coil is sized.

| coil number | conductor | remarks | usage |
|---|---|---|---|
| 1M-50-101 | 51-458 | no spacer | DSA320 |
| 1M-50-102 | 51-458 | no spacer/back wind | DSA320 |
| 1M-50-103 | 3-I-021 | 5 mil shim /no spacer | cut model |
| 1M-50-104 | 3-I-021 | low pressure cure | DSA321 |
| 1M-50-105 | 3-I-021 | | DSA321 |
| 1M-50-107 | 3-I-021 | increased end pressure | DSA322 |
| 1M-50-108 | 3-I-021 | increased end pressure | DSA322 |
| 1M-50-109 | 3-S-00021 | high end pressure | damaged |
| 1M-50-110 | 3-S-00021 | increased end pressure | DSA323? |
| 1M-50-113 | 3-S-00021 | DSA321 follower | DSA323? |
| 1M-50-114 | 3-S-00021 | DSA321 follower | DSA323? |
| 1M-50-201 | practice "C" | no spacer | DSA320 |
| 1M-50-202 | practice "C" | no spacer/flipped wedge | cut model |
| 1M-50-203 | practice "C" | 5 mil sim | sizing test |
| 1M-50-204 | practice "C" | | DSA320 |
| 1M-50-205 | 4-I-00030 | short in turn 13-14 | DSA321fail |
| 1M-50-206 | 4-I-00030 | | DSA321 |
| 1M-50-208 | 4-I-00029 | slow cooling/end cylinder off | DSA321 |
| 1M-50-209 | 4-I-00029 | increased end pressure | DSA322 |
| 1M-50-210 | 4-I-00029 | increased end pressure | DSA322 |
| 1M-50-211 | 4-I-00029 | increased end pressure | DSA323? |
| 1M-50-214 | 4-I-00025 | normal cure/flipped wedge | pulse test? |
| 1M-50-215 | 4-I-00025 | DSA321 follower | DSA323? |
| 1M-50-216 | 4-I-00025 | DSA321 follower | DSA323? |


Inner Coils @ 12 ksi
Over Size [mils]
20
15
10
5
0
−20
−10
0
10
20
Tooling Position


Outer Coils @ 12 ksi
Over Size [mils]
15.0
12.5
10.0
7.5
5.0
2.5
0.0
−20
−10
0
10
20
Tooling Position