

# ***Steam Generator Outage Summary Report***

## ***McGuire Unit 2 1996 Outage EOC 10***

Location: Hwy. 73, Cowans Ford, North Carolina 28216

NRC Docket No. 50-370

National Board No. 84

Commercial Service Date: March 1, 1984

Owner: Duke Energy Corporation  
526 South Church St.  
Charlotte, N.C. 28201-1006

Revision 0

Prepared By: *Audley W. Crisp* Date: *2/23/00*

Reviewed By: *DB Mays* Date: *2/24/00*

Approved By: *Morris Sample* Date: *2/24/00*

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3	State of North Carolina Department of Labor C/o J. M. Givens, Jr.

**FORM NIS-1 OWNER'S DATA REPORT FOR INSERVICE INSPECTIONS**

**As required by the Provisions of the ASME Code Rules**

1. Owner: Duke Energy Corporation, 526 S. Church St., Charlotte, NC 28201-1006  
(Name and Address of Owner)
2. Plant: McGuire Nuclear Station, Highway 73, Cowans Ford, N. C. 28216  
(Name and Address of Plant)
3. Plant Unit: 2
4. Owner Certificate of Authorization (if required)      N/A
5. Commercial Service Date: March 1, 1984
6. National Board Number for Unit 84
7. Components Inspected:

<u>Component</u>	<u>Manufacturer</u>	<u>Manufacturer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
Steam Generator 2A	Westinghouse	1481	NC-201307	68-112
Steam Generator 2B	Westinghouse	1482	NC-201308	68-113
Steam Generator 2C	Westinghouse	1483	NC-201309	68-114
Steam Generator 2D	Westinghouse	1484	NC-201310	68-115

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8<sup>1</sup>/<sub>2</sub> in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM NIS-1 (Back)

8. Examination Dates April 5, 1996 to May 13, 1996

9. Inspection Period Identification: 1st Period of the 2nd Interval

10. Inspection Interval Identification: 2nd Inspection Interval

11. Applicable Edition of Section XI 1989 Addenda None

12. Date/Revision of Inspection Plan: Tech Spec 3-4.4.5 Steam Generator 3/21/96 Revision Steam Generator Maintenance Manual Rev. 2

13. Abstract of Examinations and Test. Reference attached NRC Inspection Report dated 5/14/96.

14. Abstract of Results of Examination and Tests. Reference attached NRC Inspection Report dated 5/14/96.

15. Abstract of Corrective Measures. Reference attached NRC Inspection Report dated 5/14/96.

We certify that a) the statements made in this report are correct b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. (if applicable) NA Expiration Date NA

Date 2-24 2000 Signed Duke Energy Corp. By [Signature] Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of N.C. employed by \*The HSBI&I Co. of Hartford, CT. have inspected the components described in this Owners' Report during the period 4-5-1996 to 5-13-1996, and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in the Owners' Report in accordance with the Inspection Plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, test, and corrective measures described in this Owners' Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection

[Signature] Commissions NB 7728, NC 853, N-I Inspector's Signature National Board, State, Province, and Endorsements

Date 2-29 2000

\* The Hartford Steam Boiler Inspection & Insurance Co. 200 Ashford Center North Suite 300 Atlanta, GA. 30338



**DUKE POWER**

May 14, 1996

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: McGuire Nuclear Station, Docket 50-370  
Unit 2 Steam Generators  
April 1996 EOC-10 Refueling Outage  
F\*, 15-Day and 12-Month NRC Inspection Report

Pursuant to Technical Specification 3/4.4.5.5, part a, b, and c the following information is submitted:

- a. The following quantity of tubes were inspected from either side of the generator:

<u>Steam Generator</u>	<u>Tubes Inspected</u>	
	<u>Full Length</u>	
A	4125	
B	4094	
C	4173	
D	4142	

- b. The following information is submitted regarding F\* tubes: (The attached lists identify the F\* tubes, their location, and the size of degradation.)

<u>Steam Generator</u>	<u>Attachment</u>
A	1
B	2
C	3
D	4

- c. The following information is submitted concerning tube indications of imperfections. (The attached lists identify the tubes with imperfections, their locations, and their size.)


<u>Steam Generator</u>	<u>Attachment</u>
A	5
B	6
C	7
D	8

- d. The following quantities of tubes were removed from service or repaired:  
(The tubes are identified in the attached lists.)

<u>Steam Generator</u>	<u># of Tubes</u>	<u>Attachment</u>
A	42	9
B	51	10
C	32	11
D	55	12

Questions or problems should be directed to Kay Crane, Regulatory Compliance at  
(704) 875-4306.

Very truly yours,

  
T. C. McMeekin, Vice President  
McGuire Nuclear Station

cc: Mr. Victor Nerses, Project Manager  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. S. D. Ebner, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, NW - Suite 2900  
Atlanta, Georgia 30323

Mr. George Maxwell  
Senior Resident Inspector  
McGuire Nuclear Site

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Page 3

cc: C. C. Dyer

~~ENCLOSURE~~

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ATTACHMENT 1 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1*	
Bobbin	2	2	NQI		14.42	P 1	56	TEH	+9.99	09C
Bobbin	2	60	NQI		5.39	P 1	22	TEH	+11.64	09C
Bobbin	2	66	NQI		12.98	P 1	102	TEH	+5.01	09C
Bobbin	2	74	NQI		4.28	P 1	33	TEH	+10.33	09C
Bobbin	3	13	NQI		5.58	P 1	117	TEH	+4.10	09C
Bobbin	4	20	NQI		12.68	P 1	14	TEC	+15.23	09C
Bobbin	4	51	NQI		6.67	P 1	168	TEH	+9.46	09C
H/L Tubesheet	4	62	SAI		4.35	1	20	TSH	-4.33	TSH
Bobbin	5	19	NQI		5.29	P 1	89	TEH	+11.56	09C
Bobbin	6	12	NQI		2.45	P 1	142	TEH	+15.76	F/L
Bobbin	6	18	NQI		6.71	P 1	80	TEH	+8.13	F/L
Bobbin	6	19	NQI		3.11	P 1	114	TEH	+15.91	F/L
Bobbin			NQI		7.07	P 1	158	TEH	+9.09	F/L
Bobbin	6	28	NQI		10.74	P 1	67	TEH	+10.83	F/L
Bobbin	6	83	NQI		3.76	P 1	165	TEC	+13.97	F/L
Bobbin	6	84	NQI		29.61	P 1	168	TEH	+13.61	F/L
Bobbin	6	91	NQI		2.73	P 1	159	TSC	-0.34	F/L
Bobbin	6	95	NQI		2.54	P 1	149	TSC	-0.32	F/L
Bobbin	7	12	NQI		37.14	P 1	46	TEH	+4.16	F/L
Bobbin	7	51	NQI		4.10	P 1	163	TEC	+3.31	F/L
Bobbin	8	55	NQI		9.88	P 1	18	TEH	+11.61	F/L
Bobbin	9	105	NQI		20.01	P 1	23	TEH	+7.49	F/L
Bobbin	11	4	NQI		10.10	P 1	23	TEH	+8.40	F/L
Bobbin	11	28	NQI		10.70	P 1	20	TEH	+4.07	F/L
Bobbin	11	59	NQI		6.11	P 1	161	TEH	+17.15	F/L
H/L Tubesheet			SAI		4.17	1	28	TSH	-4.04	TSH
Bobbin	11	72	NQI		7.70	P 1	89	TEH	+13.19	F/L
Bobbin			NQI		8.83	P 1	131	TEH	+10.28	F/L
Bobbin	12	13	NQI		11.58	P 1	27	TEH	+4.70	F/L
Bobbin	12	23	NQI		9.44	P 1	11	TEH	+14.45	F/L
Bobbin	12	35	NQI		20.45	P 1	24	TEH	+4.78	F/L
Bobbin	12	55	NQI		6.93	P 1	26	TEC	+8.98	F/L
Bobbin	12	62	NQI		17.71	P 1	38	TEH	+11.37	F/L
Bobbin	12	73	NQI		23.90	P 1	18	TEH	+12.49	F/L
Bobbin	13	13	NQI		14.71	P 1	54	TEH	+15.12	F/L
Bobbin	13	25	NQI		9.67	P 1	22	TEH	+16.40	F/L
Bobbin	13	33	NQI		4.19	P 1	148	TEC	+3.61	F/L
Bobbin	13	100	NQI		5.71	P 1	157	TSC	-1.18	F/L
Bobbin	14	19	NQI		9.22	P 1	19	TEH	+17.45	F/L
Bobbin	14	24	NQI		9.10	P 1	21	TEH	+3.92	F/L
Bobbin	14	30	NQI		5.91	P 1	148	TEH	+13.07	F/L
Bobbin	14	45	NQI		4.53	P 1	128	TEC	+4.06	F/L
Bobbin	14	59	NQI		10.74	P 1	11	TEH	+11.70	F/L
H/L Tubesheet	15	34	MAI		0.29	1	25	TSH	-3.18	TSH
Bobbin	15	50	NQI		12.14	P 1	27	TEH	+10.82	F/L
Bobbin	15	67	NQI		42.95	P 1	41	TEH	+9.76	F/L
Bobbin	15	72	NQI		25.02	P 1	13	TEH	+7.53	F/L
Bobbin	15	105	NQI		12.69	P 1	20	TEH	+7.12	F/L
Bobbin	16	9	NQI		12.11	P 1	17	TEH	+13.31	F/L
Bobbin	16	11	NQI		9.00	P 1	11	TEH	+11.37	F/L
Bobbin	16	29	NQI		11.23	P 1	20	TEH	+13.56	F/L
H/L Tubesheet	17	11	MAI		0.47	1	29	TSH	-3.45	TSH
Bobbin	17	24	NQI		17.80	P 1	31	TEH	+10.47	F/L
Bobbin			NQI		20.92	P 1	42	TEH	+14.26	F/L
Bobbin	17	25	NQI		17.90	P 1	33	TEH	+14.49	F/L
Bobbin	17	31	NQI		11.16	P 1	21	TEH	+16.55	F/L
Bobbin			NQI		14.75	P 1	19	TEH	+9.80	F/L
Bobbin	17	41	NQI		4.95	P 1	18	TEH	+3.58	F/L
Bobbin	17	48	NQI		7.78	P 1	75	TEH	+17.26	F/L
H/L Tubesheet			MAI		5.59	1	26	TSH	-4.56	TSH
Bobbin	18	15	NQI		12.38	P 1	32	TEH	+5.59	F/L
H/L Tubesheet	18	28	MAI		0.72	1	20	TSH	-2.37	TSH
Bobbin	18	80	NQI		3.54	P 1	118	TEH	+4.86	F/L
Bobbin	18	89	NQI		6.52	P 1	160	TEH	+14.27	F/L
Bobbin	19	21	NQI		12.01	P 1	27	TEH	+8.52	F/L



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FTI TUBAN II (Version 2.3) 05/13/1996 15:45:51  
 McGuire Nuclear Station - Unit Two  
 S/G A  
 04/96 RFO  
 Bobbin,C/L Tubesheet,H/L Tubesheet

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ATTACHMENT 1 - F\*

F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	19	22	NQI		14.44	P 1	31	TEH	+4.73
Bobbin	19	29	NQI		14.54	P 1	23	TEH	+14.18
Bobbin	19	59	NQI		7.27	P 1	141	TEH	+15.30
Bobbin	19	103	NQI		1.30	P 1	143	TEC	+15.30
Bobbin	20	28	NQI		26.35	P 1	22	TEH	+14.16
Bobbin	20	87	NQI		2.40	P 1	48	TEH	+12.19
Bobbin	21	58	NQI		15.31	P 1	39	TEH	+6.70
Bobbin			NQI		20.02	P 1	61	TEH	+6.35
Bobbin	21	78	NQI		9.71	P 1	90	TEH	+3.48
H/L Tubesheet	21	98	MAI		3.51	1	203	TSH	-3.57
Bobbin	21	100	NQI		2.36	P 1	49	TEH	+13.92
Bobbin	22	23	NQI		4.64	P 1	167	TEH	+15.86
Bobbin	22	55	NQI		18.95	P 1	65	TEH	+13.88
Bobbin	23	7	NQI		6.89	P 1	151	TEH	+6.84
Bobbin	23	24	NQI		27.39	P 1	72	TEH	+16.73
Bobbin	23	29	NQI		11.05	P 1	88	TEH	+7.50
Bobbin	24	14	NQI		6.42	P 1	147	TEH	+7.46
Bobbin			NQI		8.66	P 1	147	TEH	+12.94
Bobbin	24	22	NQI		6.41	P 1	101	TEH	+5.97 to +15.30
Bobbin	24	25	NQI		10.76	P 1	157	TEH	+16.82
H/L Tubesheet			SAI		8.82	1	36	TSH	-4.89
Bobbin	24	36	NQI		14.72	P 1	89	TEH	+15.91
H/L Tubesheet	24	49	SAI		2.82	1	22	TSH	-4.00
Bobbin	25	13	NQI		8.90	P 1	112	TEH	+1.95
H/L Tubesheet	25	29	SAI		3.22	1	11	TSH	-4.36
Bobbin	25	55	NQI		7.13	P 1	133	TEH	+8.55
Bobbin	25	63	NQI		9.21	P 1	166	TEH	+7.20
Bobbin	26	12	NQI		8.45	P 1	163	TEH	+16.06
Bobbin	27	28	NQI		8.68	P 1	125	TEH	+9.07
Bobbin	27	39	NQI		20.09	P 1	24	TEH	+1.50
Bobbin	27	52	NQI		17.43	P 1	68	TEH	+6.12
Bobbin	27	58	NQI		50.88	P 1	55	TEH	+1.08
Bobbin	27	61	NQI		10.21	P 1	95	TEH	+8.71
Bobbin			NQI		11.23	P 1	88	TEH	+4.89
Bobbin			NQI		32.59	P 1	85	TEH	+7.64
Bobbin	28	13	NQI		9.66	1	134	TEH	+10.13
Bobbin	28	31	NQI		8.09	P 1	168	TEH	+3.33
Bobbin	29	38	NQI		2.31	P 1	106	TEH	+12.87
Bobbin	30	104	NQI		0.69	P 1	127	TEH	+17.37
Bobbin	31	27	NQI		13.11	P 1	25	TEH	+10.41
Bobbin	32	20	NQI		3.67	P 1	133	TEH	+16.86
H/L Tubesheet			MAI		5.17	1	32	TSH	-4.25
Bobbin	32	30	NQI		11.86	P 1	28	TEH	+14.46
Bobbin	33	62	NQI		6.46	P 1	159	TEH	+13.56
Bobbin	33	77	NQI		8.22	P 1	120	TEH	+11.77
Bobbin	33	79	NQI		2.16	P 1	41	TEH	+12.45
Bobbin			NQI		9.80	P 1	169	TEH	+15.04
C/L Tubesheet	33	91	VOL		0.28	1	116	TSC	-0.68
Bobbin	34	29	NQI		15.46	P 1	27	TEH	+5.19
Bobbin	35	49	NQI		3.32	P 1	140	TEH	+6.21
Bobbin			NQI		6.80	P 1	102	TEH	+7.08
Bobbin	35	72	NQI		19.45	P 1	76	TEH	+11.93
Bobbin	35	97	NQI		22.49	P 1	26	TEH	+3.06
Bobbin	36	44	NQI		8.86	P 1	62	TEH	+17.97
H/L Tubesheet			SAI		9.48	1	20	TSH	-3.42
Bobbin	36	53	NQI		2.21	P 1	32	TEH	+14.32
Bobbin	36	63	NQI		14.78	P 1	83	TEH	+14.44
Bobbin	37	45	NQI		11.54	P 1	30	TEH	+12.50
Bobbin	38	35	NQI		18.88	P 1	78	TEH	+11.04
Bobbin	38	41	NQI		11.79	P 1	38	TEH	+2.59
Bobbin	38	45	NQI		9.00	P 1	169	TEH	+7.60
Bobbin			NQI		12.91	P 1	36	TEH	+10.52
Bobbin			NQI		21.54	P 1	40	TEH	+9.49
Bobbin	38	51	NQI		1.63	P 1	64	TEH	+13.33
Bobbin	38	52	NQI		7.06	P 1	144	TEH	+13.10

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FTI TUBAN II (Version 2.3) 05/13/1996 15:45:51  
 McGuire Nuclear Station - Unit Two  
 S/G A  
 04/96 RFO  
 Bobbin, C/L Tubesheet, H/L Tubesheet

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ATTACHMENT 1 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	38	57	NQI		10.38	P 1	66	TEH	+14.09
Bobbin	38	63	NQI		16.95	P 1	17	TEH	+7.90
Bobbin	38	76	NQI		7.11	P 1	140	TEH	+14.55
Bobbin	38	91	NQI		14.87	P 1	84	TEH	+7.56
Bobbin			NQI		16.32	P 1	76	TEH	+2.29
Bobbin			NQI		25.72	P 1	70	TEH	+11.40
Bobbin	39	32	NQI		27.15	P 1	52	TEH	+11.37
Bobbin	39	36	NQI		9.75	P 1	17	TEH	+5.84
Bobbin			NQI		9.96	P 1	69	TEH	+3.62
Bobbin	39	57	NQI		5.56	P 1	88	TEH	+9.24
Bobbin	40	29	NQI		0.71	P 1	133	TEC	+14.90
Bobbin	40	63	NQI		18.71	P 1	38	TEH	+14.83
Bobbin	41	75	NQI		11.38	P 1	35	TEH	+6.25
Bobbin	41	82	NQI		44.36	P 1	46	TEH	+3.50
Bobbin	41	88	NQI		15.92	P 1	36	TEH	+13.28
Bobbin	42	76	NQI		10.45	P 1	15	TEC	+8.34
Bobbin			NQI		11.63	P 1	32	TEH	+7.86
Bobbin	43	68	NQI		13.17	P 1	30	TEH	+12.60
Bobbin	43	71	NQI		20.52	P 1	28	TEH	+2.73
Bobbin	43	88	NQI		6.95	P 1	16	TEH	+8.89
Bobbin	44	57	NQI		32.61	P 1	54	TEH	+14.21
Bobbin	44	61	NQI		14.15	P 1	30	TEH	+10.50
Bobbin			NQI		28.70	P 1	80	TEH	+8.47
Bobbin	44	63	NQI		17.27	P 1	27	TEH	+8.04
Bobbin	44	75	NQI		7.98	P 1	38	TEH	+7.70
Bobbin	44	84	NQI		2.49	P 1	34	TEH	+4.82
Bobbin	45	31	NQI		8.77	P 1	16	TEH	+17.24
Bobbin	45	51	NQI		60.69	P 1	43	TEH	+14.89
Bobbin	47	57	NQI		11.47	P 1	25	TEH	+7.93
Bobbin	49	71	NQI		33.04	P 1	20	TEH	+3.56 to +5.40
Bobbin	49	74	NQI		1.40	P 1	127	TEH	+4.10 to +8.63

Total Indications Found = 161  
 Total Tubes Found = 139  
 Total Tubes in Input File = 139

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ATTACHMENT 2 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	2	46	NQI		14.61	P 1	17	TEH	+12.57
Bobbin	2	84	NQI		31.86	P 1	12	TEH	+3.41
H/L Tubesheet	4	108	SAI		0.18	2	41	TSH	-4.32
H/L Tubesheet			SAI		1.02	1	19	TSH	-5.38
H/L Tubesheet	5	42	MAI		0.39	1	15	TSH	-3.13
Bobbin			NQI		13.76	P 1	20	TEH	+18.17
Bobbin	6	69	NQI		10.36	P 1	16	TEH	+8.57
Bobbin	6	70	NQI		16.63	P 1	20	TEH	+7.49
Bobbin	6	77	NQI		13.01	P 1	24	TEH	+6.45
Bobbin	7	12	NQI		8.36	P 1	14	TEH	+20.06
Bobbin	7	51	NQI		6.11	P 1	152	TEH	+13.26
Bobbin			NQI		16.96	P 1	18	TEH	+12.35
Bobbin	7	56	NQI		16.59	P 1	147	TEH	+12.11
Bobbin	7	94	NQI		11.12	P 1	70	TEH	+15.86
Bobbin	7	97	NQI		17.34	P 1	21	TEH	+3.79
Bobbin	8	27	NQI		11.01	P 1	37	TEH	+11.43
Bobbin	9	108	NQI		25.24	P 1	62	TEH	+15.06
Bobbin	10	67	NQI		17.93	P 1	28	TEH	+2.81
Bobbin	11	48	NQI		7.00	P 1	128	TEH	+2.07
Bobbin			NQI		10.17	P 1	98	TEH	+5.12
Bobbin			NQI		29.65	P 1	62	TEH	+3.99
H/L Tubesheet	11	70	MAI		4.99	1	30	TSH	-5.08
Bobbin			NQI		5.60	P 1	140	TEH	+16.88
Bobbin	11	77	NQI		29.17	P 1	61	TEH	+10.04
Bobbin	12	75	NQI		26.50	P 1	66	TEH	+9.26
Bobbin	12	112	NQI		23.49	P 1	112	TEH	+16.11
Bobbin	13	38	NQI		3.51	P 1	119	TEH	+12.07
Bobbin	14	17	NQI		5.08	P 1	155	TSC	-1.27
Bobbin	14	44	NQI		9.46	P 1	119	TEH	+17.02
Bobbin	14	110	NQI		12.50	P 1	21	TEH	+10.31
Bobbin	16	17	NQI		6.07	P 1	35	TEC	+4.17
Bobbin	16	57	NQI		2.05	P 1	55	TEH	+4.11
Bobbin	16	59	NQI		20.46	P 1	21	TEH	+8.52
Bobbin	16	67	NQI		20.71	P 1	12	TEH	+11.23
Bobbin	16	76	NQI		14.73	P 1	23	TEH	+6.69
Bobbin	16	97	NQI		16.76	P 1	30	TEH	+2.50
Bobbin	17	45	NQI		6.41	P 1	20	TEH	+7.05
Bobbin	17	61	NQI		6.10	P 1	152	TEH	+7.72
H/L Tubesheet	17	74	SAI		6.66	1	44	TSH	-4.68
Bobbin			NQI		10.77	P 1	54	TEH	+17.10
Bobbin	17	109	NQI		5.92	P 1	97	TEH	+14.15
H/L Tubesheet	18	71	MAI		7.18	1	43	TSH	-3.99
Bobbin			NQI		16.86	P 1	44	TEH	+17.52
H/L Tubesheet	18	103	MAI		9.70	1	34	TSH	-3.52
Bobbin			NQI		32.19	P 1	68	TEH	+17.87
Bobbin	19	12	NQI		7.18	P 1	22	TEH	+14.18
Bobbin	19	23	NQI		9.15	P 1	88	TEH	+10.63
Bobbin	20	39	NQI		2.69	P 1	37	TEC	+13.47
Bobbin	20	75	NQI		45.34	P 1	48	TEH	+2.86
Bobbin	20	81	NQI		6.43	P 1	150	TEH	+14.08
Bobbin	20	95	NQI		27.77	P 1	32	TEH	+7.63
Bobbin	21	14	NQI		2.71	P 1	97	TSC	-1.19
C/L Tubesheet	21	42	VOL		0.96	1	159	TSC	+0.00
Bobbin	21	52	NQI		44.16	P 1	23	TEH	+1.77
H/L Tubesheet	21	74	MAI		3.02	1	25	TSH	-5.45
Bobbin			NQI		34.71	P 1	35	TEH	+16.08
Bobbin	22	34	NQI		2.79	P 1	44	TEC	+19.39
Bobbin	22	40	NQI		3.11	P 1	142	TEC	+11.53
Bobbin			NQI		3.21	P 1	84	TEC	+5.50
Bobbin	22	77	NQI		4.86	P 1	21	TEC	+19.32
Bobbin	22	96	NQI		8.10	P 1	19	TEH	+5.68
Bobbin	23	92	NQI		30.70	P 1	36	TEH	+12.37
Bobbin	27	27	NQI		5.93	P 1	71	TEH	+16.11
H/L Tubesheet	27	28	VOL		0.30	1	83	TSH	-3.09
H/L Tubesheet			VOL		0.54	1	113	TSH	-3.57

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ATTACHMENT 2 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Tubesheet					0.62	1	122	TSH	-4.38
Bobbin	27	69	NQI		10.40	P 1	24	TEH	+7.71
Bobbin			NQI		13.11	P 1	26	TEH	+8.71
Bobbin	27	96	NQI		2.40	P 1	34	TEH	+4.69
Bobbin	27	101	NQI		16.36	P 1	27	TEH	+15.46
Bobbin	28	93	NQI		13.34	P 1	10	TEH	+8.50
Bobbin	28	99	NQI		13.25	P 1	9	TSH	-1.04
Bobbin	28	100	NQI		19.94	P 1	21	TEH	+13.39
Bobbin	28	104	NQI		16.21	P 1	18	TEH	+18.07
Bobbin	30	77	NQI		6.42	P 1	114	TEH	+11.46
Bobbin			NQI		19.55	P 1	58	TEH	+13.29
Bobbin	30	78	NQI		52.70	P 1	52	TEH	+13.06
Bobbin	31	56	NQI		5.63	P 1	172	TSC	-1.02
H/L Tubesheet	32	60	VOL		0.72	1	166	TSH	-3.81
Bobbin	34	80	NQI		18.51	P 1	18	TEH	+7.25
Bobbin			NQI		59.46	P 1	44	TEH	+9.24
Bobbin	36	25	NQI		3.95	P 1	32	TEH	+17.10
Bobbin	36	45	NQI		5.27	P 1	46	TEH	+8.59
Bobbin	36	92	NQI		10.97	P 1	28	TEH	+9.22
Bobbin	37	31	NQI		3.76	P 1	84	TEH	+9.80
Bobbin	38	34	NQI		3.41	P 1	97	TEH	+13.78
Bobbin	38	36	NQI		3.95	P 1	40	TEH	+12.87
Bobbin	38	38	NQI		10.52	P 1	33	TEH	+13.07
H/L Tubesheet	38	43	VOL		0.36	1	96	TSH	-2.59
Bobbin	38	91	NQI		10.21	P 1	113	TEH	+13.20
Bobbin	38	95	NQI		24.57	P 1	22	TEH	+11.44
Bobbin	40	48	NQI		3.46	P 1	66	TEH	+7.99
Bobbin	40	52	NQI		14.72	P 1	21	TEH	+8.32
Bobbin	41	40	NQI		4.06	P 1	52	TEH	+7.56
Bobbin			NQI		5.67	P 1	29	TEH	+8.65
Bobbin	41	44	NQI		10.35	P 1	39	TEH	+4.14
Bobbin	41	49	NQI		7.13	P 1	32	TEH	+17.76
H/L Tubesheet	41	58	SAI		1.37	1	19	TSH	-3.92
Bobbin	42	82	NQI		7.88	P 1	31	TEH	+6.81
Bobbin	43	71	NQI		7.31	P 1	29	TEH	+9.30
Bobbin	45	68	NQI		7.34	P 1	16	TEH	+14.43
Bobbin	47	77	NQI		55.24	P 1	191	TEH	+11.83

Total Indications Found = 102  
 Total Tubes Found = 85  
 Total Tubes in Input File = 85

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ATTACHMENT 3 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	2	39	NQI		4.41	P 1	111	TEH	+5.32 09C
Bobbin			NQI		36.09	P 1	71	TEH	+4.28 09C
Bobbin	2	51	NQI		3.25	P 1	92	TEH	+15.90 09C
Bobbin			NQI		10.71	P 1	164	TEH	+9.15 09C
Bobbin	2	62	NQI		3.01	P 1	36	TEC	+2.72 09C
Bobbin	2	72	NQI		1.69	P 1	130	TEC	+17.40 09C
Bobbin	2	107	NQI		21.54	P 1	27	TEH	+4.20 09C
Bobbin	3	14	NQI		7.37	P 1	46	TEH	+11.56 09C
Bobbin	3	42	NQI		24.38	P 1	18	TEH	+14.25 09C
Bobbin	3	95	NQI		18.72	P 1	44	TEH	+5.31 09C
Bobbin	4	42	NQI		7.35	P 1	150	TEH	+13.95 09C
Bobbin	4	53	NQI		72.47	P 1	51	TEH	+5.60 09C
Bobbin	4	88	NQI		34.21	P 1	34	TEH	+11.94 09C
Bobbin	4	91	NQI		4.42	P 1	163	TEH	+5.12 09C
Bobbin	5	6	NQI		10.83	P 1	130	TEH	+10.75 09C
Bobbin	5	26	NQI		7.02	P 1	118	TEH	+11.10 09C
Bobbin	5	40	NQI		17.35	P 1	18	TEC	+17.14 09C
Bobbin	5	80	NQI		18.39	P 1	30	TEH	+14.02 09C
H/L Tubesheet	6	53	SAI		0.88	1	19	TSH	-4.25 TSH
Bobbin	6	69	NQI		12.71	P 1	123	TEH	+7.36 F/L
Bobbin	7	43	NQI		27.82	P 1	14	TEH	+7.60 F/L
Bobbin	7	60	NQI		2.67	P 1	124	TEH	+13.48 F/L
H/L Tubesheet	11	45	SAI		6.73	1	18	TSH	-4.53 TSH
Bobbin	11	67	NQI		9.67	P 1	18	TEH	+12.30 F/L
Bobbin	11	72	NQI		15.20	P 1	16	TEH	+16.25 F/L
Bobbin	12	27	NQI		8.89	P 1	34	TEH	+12.69 F/L
H/L Tubesheet	12	30	MAI		1.81	1	21	TSH	-4.19 TSH
Bobbin	12	68	NQI		3.13	P 1	117	TEH	+17.51 F/L
H/L Tubesheet			MAI		2.62	1	30	TSH	-4.23 TSH
Bobbin	12	85	NQI		1.31	P 1	62	TEH	+10.72 F/L
Bobbin	12	109	NQI		1.99	P 1	113	TSC	-1.32 F/L
Bobbin	13	66	NQI		8.24	P 1	22	TEH	+13.70 F/L
Bobbin			NQI		14.00	P 1	25	TEH	+9.74 F/L
Bobbin			NQI		17.85	P 1	28	TEH	+15.73 F/L
Bobbin	13	76	NQI		8.62	P 1	25	TEH	+16.94 F/L
Bobbin			NQI		18.47	P 1	38	TEH	+13.92 F/L
H/L Tubesheet	14	54	SAI		0.81	1	21	TSH	-5.14 TSH
Bobbin	14	67	NQI		13.21	P 1	30	TEH	+5.98 F/L
Bobbin	14	71	NQI		9.03	P 1	27	TEH	+9.91 F/L
Bobbin			NQI		15.52	P 1	29	TEH	+15.73 F/L
Bobbin			NQI		19.00	P 1	35	TEH	+14.79 F/L
H/L Tubesheet	14	72	MAI		2.27	1	19	TSH	-3.53 TSH
H/L Tubesheet	14	78	MAI		4.87	1	18	TSH	-4.58 TSH
Bobbin	15	30	NQI		9.69	P 1	100	TEH	+11.09 F/L
Bobbin	15	109	NQI		4.13	P 3	77	TSH	-0.16 F/L
Bobbin	16	16	NQI		6.06	P 1	103	TEH	+14.57 F/L
Bobbin	16	18	NQI		7.55	P 1	135	TEH	+11.33 F/L
Bobbin	16	66	NQI		2.82	P 1	39	TEH	+9.86 F/L
Bobbin	16	67	NQI		24.37	P 1	23	TEH	+2.36 F/L
H/L Tubesheet	17	30	SAI		2.43	1	17	TSH	-4.31 TSH
Bobbin	17	33	NQI		10.30	P 1	171	TEH	+9.19 F/L
Bobbin	18	29	NQI		6.45	P 1	156	TEH	+14.16 F/L
H/L Tubesheet	18	60	SAI		2.35	1	25	TSH	-4.38 TSH
H/L Tubesheet	18	61	SAI		2.89	1	28	TSH	-4.44 TSH
H/L Tubesheet	18	65	SAI		2.21	1	29	TSH	-4.42 TSH
Bobbin	18	100	NQI		4.65	P 1	48	TEH	+11.84 F/L
Bobbin	20	20	NQI		19.53	P 1	70	TEH	+14.09 F/L
H/L Tubesheet	20	44	SAI		4.81	1	20	TSH	-4.39 TSH
Bobbin	20	58	NQI		19.72	P 1	25	TEH	+6.68 F/L
Bobbin	22	106	NQI		6.44	P 1	25	TEC	+19.23 F/L
Bobbin	22	107	NQI		7.43	P 1	22	TEC	+19.16 F/L
Bobbin			NQI		9.69	P 1	27	TEC	+8.41 F/L
Bobbin			NQI		10.52	P 1	22	TEC	+15.61 F/L
Bobbin	23	69	NQI		2.30	P 1	129	TEC	+18.18 F/L
Bobbin	25	22	NQI		3.85	P 1	132	TEH	+12.83 F/L

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FTI TUBAN II (Version 2.3) 05/13/1996 16:02:26  
McGuire Nuclear Station - Unit Two  
S/G C  
04/96 RFO  
Bobbin, C/L Tubesheet, H/L Tubesheet

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ATTACHMENT 3 - F\*

F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	26	27	NQI		20.45	P 1	49	TEH	+15.24	F/L
H/L Tubesheet	26	42	SAI		0.69	1	32	TSH	-5.76	TSH
Bobbin	26	105	NQI		4.72	P 1	41	TEC	+7.27	F/L
Bobbin	29	31	NQI		1.37	P 1	44	TEC	+1.23	F/L
Bobbin	29	57	NQI		1.12	P 1	73	TEH	+15.41	F/L
Bobbin	34	78	NQI		13.27	P 1	17	TEH	+8.20	F/L
Bobbin	37	44	NQI		10.40	P 1	24	TEH	+13.27	F/L
Bobbin			NQI		15.81	P 1	22	TEH	+14.23	F/L
C/L Tubesheet	40	55	VOL		0.42	1	40	TSC	-1.17	TSC
C/L Tubesheet	44	56	VOL		0.54	1	119	TSC	-1.01	TSC
C/L Tubesheet	47	55	VOL		0.72	1	135	TSC	-2.54	TSC
C/L Tubesheet	49	53	VOL		0.75	1	121	TSC	-2.49	TSC

Total Indications Found = 77

Total Tubes Found = 66

Total Tubes in Input File = 66

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ATTACHMENT 4 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	1	19	NQI		3.69	P 1	42	TEH	+1.58	09C
Bobbin	2	59	NQI		9.55	P 1	31	TEH	+5.10	09C
Bobbin	2	85	NQI		5.22	P 1	23	TEH	+14.56	09C
Bobbin	4	35	NQI		10.55	P 1	94	TEH	+17.13	09C
Bobbin	4	40	NQI		8.12	P 1	43	TEH	+1.44	09C
Bobbin	4	57	NQI		20.90	P 1	180	TEH	+7.35	09C
Bobbin	4	61	NQI		9.56	P 1	146	TEH	+14.94	09C
Bobbin	5	58	NQI		68.73	P 1	45	TEC	+3.63	09C
Bobbin			NQI		137.90	P 1	30	TEC	+5.18	09C
Bobbin	5	59	NQI		7.25	P 1	49	TEC	+4.51	09C
Bobbin			NQI		69.17	P 1	44	TEC	+3.87	09C
Bobbin			NQI		94.20	P 1	26	TEC	+5.40	09C
Bobbin	6	13	NQI		1.62	P 1	144	TEC	+20.15	09C
Bobbin			NQI		2.14	P 1	147	TSC	-1.14	F/L
Bobbin	6	17	NQI		3.02	P 1	155	TEC	+8.73	09C
Bobbin			NQI		4.15	P 1	35	TEC	+7.55	F/L
Bobbin	6	19	NQI		1.66	P 1	130	TEC	+20.18	09C
Bobbin			NQI		1.91	P 1	123	TSC	-1.11	F/L
Bobbin	6	64	NQI		5.20	P 1	111	TEH	+15.92	F/L
H/L Tubesheet			SAI		5.11	1	8	TSH	-5.54	TSH
Bobbin	6	99	NQI		6.04	P 1	91	TEH	+15.98	F/L
Bobbin	7	14	NQI		1.05	P 1	81	TSC	-0.93	F/L
Bobbin	7	72	NQI		58.86	P 1	29	TEH	+16.64	F/L
H/L Tubesheet			MAI		19.38	1	32	TSH	-4.50	TSH
Bobbin	7	81	NQI		30.65	P 1	36	TEH	+3.36	F/L
Bobbin			NQI		40.68	P 1	31	TEH	+3.52	F/L
Bobbin	7	94	NQI		6.09	P 1	81	TEH	+16.10	F/L
Bobbin	8	84	NQI		19.52	P 1	103	TEH	+7.02	F/L
Bobbin	9	10	NQI		1.57	P 1	110	TSC	-0.96	F/L
Bobbin	9	14	NQI		1.68	P 1	116	TSC	-0.97	F/L
Bobbin	9	79	NQI		12.50	P 1	60	TEH	+13.79	F/L
Bobbin			NQI		21.69	P 1	160	TEH	+12.50	F/L
Bobbin	10	59	NQI		2.32	P 1	61	TEC	+2.19	F/L
Bobbin	10	82	NQI		23.40	P 1	30	TEH	+13.06	F/L
Bobbin			NQI		23.84	P 1	99	TEH	+9.74	F/L
Bobbin	10	87	NQI		6.37	P 1	145	TEH	+18.03	F/L
H/L Tubesheet			MAI		3.89	1	37	TSH	-3.33	TSH
H/L Tubesheet	11	64	SAI		1.42	1	26	TSH	-4.46	TSH
Bobbin	11	94	NQI		1.61	P 1	56	TEH	+6.86	F/L
Bobbin	11	105	NQI		22.01	P 1	145	TEH	+4.00	F/L
Bobbin	12	88	NQI		4.50	P 1	53	TEH	+16.78	F/L
H/L Tubesheet			SAI		3.68	1	27	TSH	-4.35	TSH
Bobbin	13	64	NQI		8.07	P 1	92	TEH	+16.14	F/L
Bobbin	13	82	NQI		68.96	P 1	53	TEH	+5.30	F/L
Bobbin	14	75	NQI		0.99	P 1	85	TEH	+11.32	F/L
Bobbin			NQI		2.25	P 1	26	TEH	+10.41	F/L
Bobbin	14	81	NQI		8.17	P 1	37	TEH	+10.76	F/L
Bobbin			NQI		50.80	P 1	190	TEH	+12.87	F/L
Bobbin	14	93	NQI		3.41	P 1	73	TEH	+12.28	F/L
Bobbin	15	16	NQI		3.72	P 1	58	TEC	+8.50	F/L
Bobbin	15	32	IDI	31	4.39	P 1	11	TEH	+9.29	F/L
Bobbin	15	37	NQI		38.32	P 1	13	TEH	+15.36	F/L
Bobbin	16	60	NQI		8.51	P 1	25	TEH	+10.37	F/L
Bobbin	16	69	NQI		11.02	P 1	17	TEH	+14.40	F/L
Bobbin	16	92	NQI		9.36	P 1	29	TEH	+15.64	F/L
Bobbin			NQI		17.23	P 1	35	TEH	+8.54	F/L
Bobbin	16	99	NQI		18.83	P 1	189	TEH	+15.53	F/L
Bobbin	17	101	NQI		5.71	P 1	173	TEH	+15.17	F/L
Bobbin	18	75	NQI		10.63	3	123	TEH	+7.24	F/L
Bobbin	18	93	NQI		10.77	P 1	170	TEH	+8.53	F/L
Bobbin	19	82	NQI		11.28	P 1	61	TEH	+3.63	F/L
Bobbin	20	41	NQI		3.37	P 1	56	TEC	+3.33	F/L
Bobbin	20	52	NQI		2.96	P 1	144	TEC	+8.89	F/L
Bobbin	20	58	NQI		11.15	P 1	24	TEH	+7.17	F/L
Bobbin	20	59	NQI		2.96	P 1	77	TEC	+1.26	F/L

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ATTACHMENT 4 - F\*  
 F\* QUERY

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	21	56	NQI		16.16	P 1	58	TEH	+0.63 F/L
Bobbin	22	67	NQI		4.12	P 1	140	TEC	+10.34 F/L
Bobbin	23	104	NQI		9.63	P 1	34	TEH	+1.56 F/L
Bobbin	25	94	NQI		9.43	P 1	18	TEH	+16.36 F/L
Bobbin	26	39	NQI		45.91	P 1	40	TEH	+12.19 F/L
Bobbin	26	61	NQI		8.57	P 1	20	TEH	+13.47 F/L
Bobbin	26	66	NQI		3.17	P 1	55	TEH	+3.57 F/L
Bobbin	26	94	NQI		2.29	P 1	36	TSC	-1.16 F/L
Bobbin	27	71	NQI		15.02	P 1	24	TEH	+18.33 F/L
H/L Tubesheet			MAI		5.92	1	32	TSH	-3.40 TSH
H/L Tubesheet	28	35	SAI		3.49	1	21	TSH	-4.24 TSH
Bobbin	28	70	NQI		14.04	P 1	27	TEH	+17.25 F/L
H/L Tubesheet			MAI		4.43	1	31	TSH	-4.72 TSH
Bobbin	29	61	NQI		10.95	P 1	145	TEH	+14.98 F/L
Bobbin	29	76	NQI		7.96	P 1	133	TEH	+16.47 F/L
Bobbin	29	103	NQI		22.72	P 1	35	TEH	+18.32 F/L
H/L Tubesheet			MAI		2.55	1	23	TSH	-3.40 TSH
Bobbin	30	95	NQI		3.43	P 3	86	TSH	-0.12 F/L
Bobbin	31	14	NQI		4.05	P 1	101	TEC	+3.04 F/L
Bobbin	31	88	NQI		3.20	P 1	20	TEH	+10.66 F/L
Bobbin	31	89	NQI		2.76	P 1	27	TEH	+6.86 F/L
Bobbin	32	50	NQI		3.52	P 1	145	TSC	-1.23 F/L
Bobbin	32	51	NQI		4.67	P 1	150	TSC	-1.21 F/L
Bobbin	32	99	NQI		6.79	P 1	85	TEH	+12.16 F/L
Bobbin	33	31	NQI		6.72	P 1	156	TSC	-1.18 F/L
Bobbin	33	33	NQI		3.88	P 1	150	TEC	+15.68 F/L
Bobbin	33	46	NQI		2.27	P 1	113	TSC	-1.23 F/L
Bobbin	33	50	NQI		4.61	P 1	151	TSC	-1.22 F/L
Bobbin	33	62	NQI		3.38	P 1	158	TSC	-1.04 F/L
Bobbin	33	70	NQI		1.18	P 1	119	TEC	+1.43 F/L
Bobbin	33	75	NQI		0.83	P 1	94	TEH	+3.04 F/L
Bobbin	34	43	NQI		4.64	P 1	133	TSC	-1.23 F/L
Bobbin	34	64	NQI		1.56	P 1	145	TEC	+15.47 F/L
Bobbin	34	68	NQI		1.06	P 1	76	TEH	+2.47 F/L
Bobbin	34	70	NQI		3.40	P 1	161	TEH	+13.99 F/L
Bobbin	34	72	NQI		3.09	P 1	26	TEH	+5.84 F/L
Bobbin	34	79	NQI		3.94	P 1	34	TEH	+5.21 F/L
Bobbin	36	39	NQI		2.73	P 1	15	TEH	+17.32 F/L
Bobbin	37	48	NQI		2.21	P 1	74	TSC	-1.22 F/L
Bobbin	37	55	NQI		4.88	P 1	29	TEC	+15.12 F/L
Bobbin	37	58	NQI		3.10	P 1	10	TSH	-1.15 F/L
Bobbin	37	65	NQI		2.10	P 1	81	TEC	+1.28 F/L
Bobbin	37	94	NQI		2.25	P 1	142	TSC	-0.58 F/L
Bobbin			NQI		3.37	P 1	31	TEC	+19.14 F/L
Bobbin	38	56	NQI		21.31	P 1	49	TEH	+16.08 F/L
Bobbin	38	62	NQI		1.92	P 1	56	TEC	+5.30 F/L
Bobbin	39	91	NQI		2.89	P 1	161	TEH	+15.06 F/L
Bobbin	40	79	NQI		7.86	3	20	TEH	+13.60 F/L
Bobbin			NQI		13.07	P 1	39	TEH	+17.48 F/L
H/L Tubesheet			MAI		1.67	1	26	TSH	-4.44 TSH
Bobbin	41	63	NQI		1.87	P 1	67	TEC	+2.00 F/L
H/L Tubesheet	41	83	SAI		1.58	1	26	TSH	-5.02 TSH
Bobbin	42	49	NQI		2.09	P 1	64	TEH	+14.79 F/L
Bobbin	42	71	NQI		4.17	P 1	38	TEH	+11.77 F/L
Bobbin	42	73	NQI		18.85	P 1	66	TEH	+17.21 F/L
H/L Tubesheet			MAI		11.42	1	33	TSH	-4.26 TSH
Bobbin	43	33	NQI		3.51	P 1	33	TEC	+19.06 F/L
Bobbin	43	68	NQI		1.48	P 1	66	TEH	+19.17 F/L
Bobbin	45	86	NQI		12.57	1	18	TEH	+12.38 F/L
Bobbin	47	79	NQI		18.51	P 1	17	TEH	+14.59 F/L
Bobbin	48	47	NQI		4.33	P 1	43	TEH	+13.31 F/L

Total Indications Found = 126  
 Total Tubes Found = 103  
 Total Tubes in Input File = 103



ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	2	2	NQI		14.42	P 1	56	TEH	+9.99
Bobbin	2	60	NQI		5.39	P 1	22	TEH	+11.64
Bobbin	2	66	NQI		12.98	P 1	102	TEH	+5.01
Bobbin	2	74	NQI		4.28	P 1	33	TEH	+10.33
Bobbin	2	75	NQI		1.08	P 1	46	03H	+0.01
H/L Special I			SAI		0.96	1	60	03H	-0.01
H/L Tubesheet	2	76	SAI		0.83	1	35	TSH	+0.17
Bobbin	2	78	ADI		2.29	6	66	19C	+18.06
C/L Special I			VOL		0.46	1	99	19C	+18.06
Bobbin	3	1	ODI	10	0.22	P 1	139	18C	-0.09
Bobbin	3	2	NQI		1.31	P 1	35	02H	+0.10
Bobbin	3	13	NQI		5.58	P 1	117	TEH	+4.10
Bobbin	3	16	ODI	17	0.94	3	133	21C	+12.48
Bobbin			ODI	21	0.61	3	128	12C	+24.45
Bobbin			NQI		40.45	P 1	60	TEH	+16.79
C/L Special I			VOL		0.28	1	93	12C	+24.35
C/L Special I			VOL		0.66	1	95	21C	+12.44
H/L Special I			MAI		16.66	1	15	TSH	-5.06
Bobbin	3	111	ODI	13	0.53	4	141	19C	+27.14
C/L Special I			VOL		0.26	1	91	19C	+26.68
Bobbin	4	4	NQI		0.87	P 1	89	02H	+0.14
H/L Special I			SAI		1.07	1	42	02H	+0.06
Bobbin	4	5	ODI	19	0.55	3	131	19C	+9.18
C/L Special I			VOL		0.35	1	131	19C	+8.55
C/L Special I			VOL		0.46	1	68	19C	+0.95
Bobbin	4	20	NQI		12.68	P 1	14	TEC	+15.23
Bobbin	4	23	NQI		0.37	P 1	84	03H	-0.01
Bobbin	4	51	NQI		6.67	P 1	168	TEH	+9.46
Bobbin	4	59	NQI		8.02	P 1	22	TEH	+15.11
H/L Special I			MAI		1.35	1	33	TEH	+16.09
H/L Special I			MAI		2.57	1	15	TEH	+1.08 to +1.74
H/L Tubesheet	4	62	SAI		4.35	1	20	TSH	-4.33
Bobbin	4	70	ODI	17	0.88	4	133	13C	+13.49
C/L Special I			VOL		0.85	1	59	13C	+13.49
Bobbin	4	83	NQI		36.78	P 1	41	TEH	+2.34
H/L Special I			MAI		6.46	1	20	TEH	+0.00 to +1.93
H/L Special I			MAI		11.70	1	24	TEH	+3.12 to +3.74
Bobbin	4	84	NQI		3.52	P 1	117	TEH	+6.04
H/L Special I			MAI		1.01	4	16	TEH	+2.97
H/L Special I			SAI		3.71	1	220	TEH	+6.63
H/L Special I			MAI		2.53	4	23	TEH	+0.00 to +1.32
Bobbin	4	96	ODI	15	1.32	3	129	03H	+37.96
H/L Special I			VOL		1.40	1	161	04H	-6.33
Bobbin	4	102	ODI	9	0.31	3	144	11C	+39.48
Bobbin	4	105	ODI	9	0.55	3	145	05H	+16.10
Bobbin	4	106	ODI	10	1.00	3	144	07H	+32.04
Bobbin			NQI		1.62	P 1	24	02H	+0.03
H/L Special I			SAI		0.78	1	38	02H	+0.00
H/L Special I			VOL		0.93	1	142	08H	-11.09
H/L Special I			VOL		1.04	1	150	08H	-10.13
Bobbin	4	108	NQI		0.44	3	71	02H	+13.80
Bobbin			ODI	2	1.70	4	150	19C	+8.01
Bobbin			ODI	5	0.50	4	146	21C	+2.92
Bobbin			ODI	8	0.99	3	150	04H	+9.97
Bobbin			NQI		0.70	P 1	22	03H	+0.11
C/L Special I			VOL		0.27	1	108	21C	+2.91
C/L Special I			VOL		0.38	1	114	19C	+8.31
H/L Special I			VOL		0.28	1	155	04H	+10.09
H/L Special I			VOL		0.68	1	120	02H	+13.35
Bobbin	4	110	ODI	13	0.39	3	138	10C	+20.43
C/L Special I			VOL		0.68	1	115	10C	+17.99
Bobbin	4	114	ODI	16	0.44	3	134	10C	+20.87
C/L Special I			VOL		0.81	1	81	10C	+17.34
Bobbin	5	19	NQI		5.29	P 1	89	TEH	+11.56
Bobbin	5	23	NQI		0.42	3	114	03H	+35.44

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			NQI		0.50	3	105	10C	+11.66
Bobbin			ODI	6	0.95	3	150	10C	+12.59
Bobbin			ODI	32	0.77	3	112	07H	+28.49
C/L Special I			VOL		0.98	1	129	10C	+11.51
H/L Special I			VOL		1.71	1	89	04H	-8.57
H/L Special I			VOL		2.97	1	162	07H	+27.44
H/L Special I			VOL		3.09	1	157	07H	+28.09
Bobbin	5	24	ODI	28	0.64	4	117	12C	+20.62
C/L Special I			VOL		0.58	1	99	12C	+19.91
Bobbin	5	46	ODI	8	0.91	4	137	TSC	+3.61
C/L Special I			VOL		0.47	1	93	TSC	+3.12
H/L Tubesheet	5	57	SAI		0.22	1	65	TSH	-1.26
Bobbin	5	59	NQI		0.46	3	108	16C	+6.77
C/L Special I			VOL		0.35	1	129	16C	+6.76
Bobbin	5	65	ADI		1.42	6	45	01H	+15.51
Bobbin	5	104	ODI	16	0.63	3	134	10C	+6.00
C/L Special I			VOL		1.62	1	165	10C	+5.43
Bobbin	6	4	ODI	14	0.69	3	136	17C	+7.64
C/L Special I			VOL		0.70	1	92	17C	+7.67
Bobbin	6	10	ODI	5	0.94	3	149	12C	+21.59
C/L Special I			VOL		0.91	1	105	12C	+21.36
Bobbin	6	12	NQI		2.45	P 1	142	TEH	+15.76
Bobbin	6	18	NQI		6.71	P 1	80	TEH	+8.13
Bobbin	6	19	NQI		3.11	P 1	114	TEH	+15.91
Bobbin			NQI		7.07	P 1	158	TEH	+9.09
Bobbin	6	22	ODI	28	0.43	3	118	03H	+32.52
H/L Special I			VOL		1.14	1	123	03H	+31.58
Bobbin	6	23	ADI		1.33	6	61	16C	+5.96
C/L Special I			VOL		0.50	1	112	16C	+6.15
Bobbin	6	28	NQI		10.74	P 1	67	TEH	+10.83
Bobbin	6	40	ADI		1.33	6	80	03H	+25.22
H/L Special I			VOL		1.41	1	119	03H	+24.82
Bobbin	6	41	ODI	18	0.81	3	131	05H	+38.99
H/L Special I			VOL		2.66	1	34	06H	-4.07
Bobbin	6	42	ODI	18	0.85	4	129	16C	+8.17
C/L Special I			VOL		0.35	1	110	16C	-0.61
C/L Special I			VOL		0.55	1	97	16C	+8.21
Bobbin	6	44	ADI		1.17	6	74	19C	+4.99
C/L Special I			VOL		0.58	1	114	19C	+4.92
Bobbin	6	47	ODI	14	0.80	4	132	07H	+33.77
Bobbin			ODI	16	0.58	3	134	07H	+3.83
H/L Special I			VOL		1.40	1	114	07H	+3.75
Bobbin	6	51	ADI		0.99	6	89	03H	+34.37
Bobbin			ODI	15	0.90	4	131	14C	+3.67
C/L Special I			VOL		0.41	1	81	14C	+4.04
Bobbin	6	81	ODI	8	0.76	3	144	20C	+5.05
Bobbin			ODI	35	0.89	3	108	18C	+12.18
C/L Special I			VOL		0.95	1	97	20C	+5.05
C/L Special I			VOL		1.08	1	89	18C	+12.18
Bobbin	6	83	NQI		3.76	P 1	165	TEC	+13.97
Bobbin	6	84	NQI		29.61	P 1	168	TEH	+13.61
Bobbin	6	91	NQI		2.73	P 1	159	TSC	-0.34
Bobbin	6	95	NQI		2.54	P 1	149	TSC	-0.32
Bobbin	6	101	ODI	3	0.41	P 1	156	05H	-0.02
Bobbin	6	102	NQI		0.36	P 1	81	03H	+0.12
Bobbin	7	12	NQI		37.14	P 1	46	TEH	+4.16
Bobbin	7	43	NQI		0.10	P 1	126	03H	+0.02
Bobbin	7	51	NQI		4.10	P 1	163	TEC	+3.31
Bobbin	7	60	NQI		2.68	3	56	21C	+5.20
Bobbin	7	98	ODI	18	0.67	3	124	TSH	+2.74
H/L Special I			VOL		0.37	1	44	TSH	+2.84
Bobbin	7	108	ADI		2.08	6	59	10C	+6.64
C/L Special I			VOL		0.63	1	114	10C	+6.83
Bobbin	8	20	NQI		0.41	3	112	18C	+2.82
C/L Special I			VOL		0.57	1	141	18C	+3.00

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
H/L Tubesheet	8	34	SAI		0.35	2	21	TSH	+0.00	TSH
Bobbin	8	55	NQI		9.88	P 1	18	TEH	+11.61	F/L
Bobbin	8	59	NQI		0.34	3	128	13C	+19.85	F/L
Bobbin			ODI	14	0.67	3	126	13C	+14.24	F/L
Bobbin			NQI		45.71	P 1	52	TEH	+5.32	F/L
H/L Tubesheet			SAI		0.39	1	23	TSH	-2.50	TSH
C/L Special I			SAI		0.29	1	30	12C	-7.88	12C
Bobbin	8	67	NQI		0.35	P 1	97	02H	+0.16	F/L
H/L Special I			SAI		0.35	1	42	02H	+0.02	02H
Bobbin	8	99	NQI		0.83	P 1	155	03H	+0.14	F/L
Bobbin	9	43	ODI	3	0.66	3	142	06H	+5.33	F/L
Bobbin			ODI	6	0.66	3	139	05H	+5.75	F/L
Bobbin			ODI	8	1.12	3	137	12C	+2.59	F/L
Bobbin			ODI	15	0.81	4	133	05H	+32.47	F/L
Bobbin			ODI	20	0.63	3	125	06H	+18.02	F/L
C/L Special I			VOL		1.14	1	82	12C	+2.34	12C
H/L Special I			VOL		0.93	1	128	06H	+4.99	06H
H/L Special I			VOL		1.48	1	106	06H	+17.45	06H
H/L Special I			VOL		1.76	1	102	05H	+31.10	06H
H/L Special I			VOL		2.30	1	125	05H	+5.04	06H
Bobbin	9	70	ADI		1.95	6	90	07H	+28.47	F/L
H/L Special I			VOL		0.28	1	57	07H	+29.13	07H
Bobbin	9	73	NQI		1.08	3	103	07H	+11.31	F/L
Bobbin			NQI		1.11	3	121	05H	+30.89	F/L
H/L Special I			VOL		1.24	1	98	06H	-13.05	06H
H/L Special I			VOL		2.49	1	121	07H	+11.53	07H
Bobbin	9	74	ADI		2.22	6	72	10C	+36.74	F/L
C/L Special I			VOL		0.68	1	119	09C	-7.26	09C
Bobbin	9	82	NQI		0.95	3	39	07H	+20.92	F/L
H/L Special I			VOL		1.58	1	130	07H	+20.90	07H
Bobbin	9	86	ADI		1.50	6	64	07H	+18.61	F/L
H/L Special I			VOL		0.38	1	140	07H	+19.26	07H
Bobbin	9	105	NQI		20.01	P 1	23	TEH	+7.49	F/L
Bobbin	10	104	NQI		0.38	P 1	105	03H	+0.22	F/L
Bobbin	11	4	NQI		10.10	P 1	23	TEH	+8.40	F/L
Bobbin	11	28	NQI		10.70	P 1	20	TEH	+4.07	F/L
Bobbin	11	59	NQI		6.11	P 1	161	TEH	+17.15	F/L
H/L Tubesheet			SAI		4.17	1	28	TSH	-4.04	TSH
Bobbin	11	67	NQI		0.78	3	32	17C	+4.58	F/L
Bobbin	11	72	NQI		7.70	P 1	89	TEH	+13.19	F/L
Bobbin			NQI		8.83	P 1	131	TEH	+10.28	F/L
Bobbin	11	84	ODI	13	1.49	3	136	10C	+38.86	F/L
C/L Special I			VOL		1.22	1	113	09C	-6.14	09C
Bobbin	11	97	ODI	13	0.72	3	136	12C	+18.31	F/L
C/L Special I			VOL		0.56	1	104	12C	+18.31	12C
Bobbin	11	99	ODI	18	1.29	4	133	06H	+16.68	F/L
Bobbin			WAR	9	0.44	P 4	0	AV1	+0.00	F/L
H/L Special I			VOL		1.93	1	113	06H	+16.87	06H
Bobbin	11	104	WAR	13	0.63	P 4	0	AV1	+0.00	F/L
Bobbin	11	112	ADI		0.98	6	77	12C	+11.01	F/L
C/L Special I			VOL		0.34	1	111	12C	+11.01	12C
Bobbin	12	13	NQI		11.58	P 1	27	TEH	+4.70	F/L
Bobbin	12	23	NQI		9.44	P 1	11	TEH	+14.45	F/L
Bobbin	12	27	ODI	31	0.39	P 1	115	19C	+0.58	F/L
Bobbin	12	35	NQI		20.45	P 1	24	TEH	+4.78	F/L
Bobbin	12	36	NQI		11.70	P 1	27	TEH	+13.33	F/L
H/L Tubesheet			SAI		0.43	2	18	TSH	-0.05	TSH
Bobbin	12	55	NQI		6.93	P 1	26	TEC	+8.98	F/L
Bobbin	12	62	NQI		17.71	P 1	38	TEH	+11.37	F/L
H/L Special I			MAI		4.07	1	31	TEH	+11.65	TSH
Bobbin	12	73	NQI		23.90	P 1	18	TEH	+12.49	F/L
Bobbin	13	8	NQI		10.57	P 1	19	TEC	+9.35	F/L
H/L Tubesheet			SAI		0.38	1	123	TSH	+0.00	TSH
H/L Tubesheet	13	12	SAI		0.31	1	69	TSH	-2.16	TSH
Bobbin	13	13	NQI		14.71	P 1	54	TEH	+15.12	F/L

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Tubesheet	13	19	SCI		0.26	1	136	TSH	-0.11
Bobbin	13	25	NQI		9.67	P 1	22	TEH	+16.40
Bobbin	13	33	ODI	2	0.67	P 1	136	03H	+0.24
Bobbin			NQI		4.19	P 1	148	TEC	+3.61
Bobbin	13	77	NQI		0.34	P 1	102	09C	+0.02
Bobbin	13	92	ODI	12	0.72	3	137	05H	+0.04
Bobbin	13	100	NQI		5.71	P 1	157	TSC	-1.18
H/L Tubesheet	14	5	SAI		1.43	1	18	TSH	+0.00
Bobbin	14	19	NQI		9.22	P 1	19	TEH	+17.45
Bobbin	14	24	NQI		9.10	P 1	21	TEH	+3.92
Bobbin	14	30	NQI		5.91	P 1	148	TEH	+13.07
Bobbin	14	45	NQI		4.53	P 1	128	TEC	+4.06
Bobbin	14	59	NQI		10.74	P 1	11	TEH	+11.70
Bobbin	14	67	ADI		3.48	6	72	13C	+5.90
C/L Special I			VOL		0.78	1	29	13C	+5.90
Bobbin	14	69	ADI		1.83	6	66	01H	+15.59
H/L Special I			VOL		0.70	1	129	02H	-4.97
Bobbin	14	87	ODI	11	0.58	3	139	06H	+37.05
Bobbin			ODI	24	0.37	3	122	06H	+38.62
Bobbin			ODI	29	1.13	3	116	07H	+14.99
H/L Special I			VOL		1.55	1	129	07H	+14.76
Bobbin	14	94	ADI		1.27	6	75	13C	+5.35
Bobbin			ADI		1.45	6	56	13C	+1.05
Bobbin			ADI		1.69	6	59	14C	+7.82
Bobbin			ODI	29	1.15	4	123	13C	+12.99
C/L Special I			VOL		0.63	1	76	13C	-4.83 to +13.52
Bobbin	14	112	ODI	28	1.12	3	118	11C	+13.68
C/L Special I			VOL		2.30	1	99	11C	+13.68
Bobbin	15	27	ODI	23	0.49	3	124	10C	+10.74
C/L Special I			VOL		0.50	1	104	10C	+10.27
H/L Tubesheet	15	34	MAI		0.29	1	25	TSH	-3.18
Bobbin	15	45	NQI		21.16	P 1	37	TEH	+17.29
H/L Tubesheet			MAI		7.07	1	35	TSH	-4.29
H/L Tubesheet			SAI		0.31	1	20	TSH	-1.21
Bobbin	15	50	ODI	1	0.24	P 1	135	09C	+0.06
Bobbin			NQI		12.14	P 1	27	TEH	+10.82
Bobbin	15	67	NQI		42.95	P 1	41	TEH	+9.76
Bobbin	15	72	ADI		2.00	6	54	11C	+38.27
Bobbin			NQI		25.02	P 1	13	TEH	+7.53
C/L Special I			VOL		0.78	1	81	10C	-5.63
Bobbin	15	78	ODI	9	1.31	4	142	05H	+32.30
Bobbin	15	81	ODI	7	0.92	3	143	06H	+5.33
H/L Special I			VOL		0.70	1	62	06H	+5.50
Bobbin	15	105	NQI		12.69	P 1	20	TEH	+7.12
H/L Tubesheet	16	4	NQI		0.13	1	293	TSH	-1.44
Bobbin	16	9	NQI		12.11	P 1	17	TEH	+13.31
Bobbin	16	11	NQI		9.00	P 1	11	TEH	+11.37
Bobbin	16	22	ODI	6	1.07	3	139	02H	+16.74
H/L Special I			VOL		2.03	1	101	03H	-6.96
Bobbin	16	29	NQI		11.23	P 1	20	TEH	+13.56
H/L Tubesheet	16	35	MAI		0.72	1	22	TSH	-1.13
Bobbin	16	51	ODI	15	0.29	3	131	06H	+37.96
H/L Special I			VOL		0.52	1	103	07H	-6.11
H/L Tubesheet	16	96	VOL		0.40	1	135	TSH	-0.26
H/L Tubesheet			VOL		0.49	1	128	TSH	-1.73
Bobbin	16	99	NQI		0.33	P 1	73	02H	-0.02
H/L Tubesheet	17	11	MAI		0.47	1	29	TSH	-3.45
Bobbin	17	24	NQI		17.80	P 1	31	TEH	+10.47
Bobbin			NQI		20.92	P 1	42	TEH	+14.26
Bobbin	17	25	NQI		17.90	P 1	33	TEH	+14.49
Bobbin	17	31	NQI		11.16	P 1	21	TEH	+16.55
Bobbin			NQI		14.75	P 1	19	TEH	+9.80
Bobbin	17	41	NQI		4.95	P 1	18	TEH	+3.58
Bobbin	17	48	NQI		7.78	P 1	75	TEH	+17.26
H/L Tubesheet			MAI		5.59	1	26	TSH	-4.56

## ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	17	51	ODI	33	0.41	3	115	14C	+8.31
C/L Special I			VOL		0.66	1	113	13C	-8.17
C/L Special I			VOL		0.89	1	107	13C	-1.88
Bobbin	17	65	ADI		1.08	6	71	05H	+27.59
H/L Special I			VOL		1.33	1	166	05H	+28.52
Bobbin	17	76	ODI	5	0.76	3	148	03H	+33.54
H/L Special I			VOL		1.89	1	5	04H	-10.33
H/L Tubesheet	17	98	VOL		0.28	1	136	TSH	+1.31
Bobbin	17	110	ODI	12	0.89	3	139	01H	+12.81
H/L Special I			VOL		0.51	1	149	02H	-8.10
Bobbin	18	5	ODI	9	0.97	4	145	12C	+12.57
C/L Special I			VOL		0.61	1	104	12C	+12.28
Bobbin	18	15	NQI		12.38	P 1	32	TEH	+5.59
H/L Tubesheet	18	18	SAI		0.26	1	143	TSH	+0.00
H/L Tubesheet	18	19	SAI		0.22	1	130	TSH	+0.03
H/L Tubesheet			SAI		0.36	1	34	TSH	-1.12
H/L Tubesheet	18	28	MAI		0.72	1	20	TSH	-2.37
Bobbin	18	30	ODI	10	0.67	4	144	12C	+23.42
Bobbin	18	38	ODI	17	0.55	4	135	19C	+3.49
Bobbin	18	39	ODI	14	1.04	4	138	11C	+36.08
C/L Special I			VOL		0.66	1	137	10C	-7.89
Bobbin	18	44	ADI		1.12	6	67	05H	+32.74
Bobbin	18	80	NQI		3.54	P 1	118	TEH	+4.86
Bobbin	18	89	NQI		6.52	P 1	160	TEH	+14.27
Bobbin	19	15	ODI	10	0.51	3	135	09C	+9.01
Bobbin	19	21	NQI		12.01	P 1	27	TEH	+8.52
Bobbin	19	22	NQI		14.44	P 1	31	TEH	+4.73
Bobbin	19	29	NQI		14.54	P 1	23	TEH	+14.18
Bobbin	19	37	ODI	14	1.34	4	139	20C	+5.09
C/L Special I			VOL		0.60	1	86	20C	+5.31
Bobbin	19	56	ADI		0.88	6	78	11C	+10.93
Bobbin			ODI	13	1.17	4	140	11C	+16.97
C/L Special I			VOL		0.85	1	85	11C	+17.63
Bobbin	19	59	NQI		7.27	P 1	141	TEH	+15.30
Bobbin	19	64	NQI		0.39	P 1	38	02H	+0.08
Bobbin	19	68	NQI		0.39	3	102	06H	+26.18
H/L Special I			VOL		0.20	1	72	06H	+25.52
Bobbin	19	96	WAR	11	0.53	P 4	0	AV1	+0.00
Bobbin	19	103	NQI		1.30	P 1	143	TEC	+15.30
Bobbin	20	17	ODI	15	0.93	4	137	11C	+22.79
C/L Special I			VOL		0.68	1	79	11C	+22.86
Bobbin	20	20	ODI	5	0.42	4	149	07H	+38.88
H/L Special I			VOL		0.91	1	122	08H	-1.57
Bobbin	20	28	NQI		26.35	P 1	22	TEH	+14.16
Bobbin	20	30	ODI	7	1.14	4	147	06H	+13.59
H/L Special I			VOL		1.63	1	132	06H	+13.59
Bobbin	20	49	ODI	17	0.60	4	135	11C	+28.44
Bobbin	20	56	ODI	12	0.49	3	133	04H	+33.92
Bobbin	20	87	NQI		2.40	P 1	48	TEH	+12.19
Bobbin	20	109	NQI		0.55	3	110	03H	+25.45
H/L Special I			VOL		1.28	1	160	04H	-18.03
Bobbin	21	12	ODI	15	0.37	4	137	05H	+23.75
H/L Special I			VOL		0.98	1	150	05H	+22.65
Bobbin	21	24	ADI		1.67	6	86	05H	+36.98
H/L Special I			VOL		1.46	1	110	06H	-7.30
Bobbin	21	26	ADI		1.38	6	83	10C	+40.35
C/L Special I			VOL		0.46	1	73	09C	-3.77
Bobbin	21	27	ODI	12	1.38	4	141	12C	+8.05
C/L Special I			VOL		1.33	1	97	12C	+7.81
Bobbin	21	34	ODI	7	0.73	4	147	11C	+13.38
Bobbin			ODI	20	0.38	4	131	11C	+15.51
C/L Special I			VOL		0.58	1	73	11C	+11.38
C/L Special I			VOL		0.63	1	53	11C	+15.96
C/L Special I			VOL		0.67	1	64	11C	+14.03
Bobbin	21	35	ADI		1.02	6	67	12C	+21.64

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			ODI	29	0.38	4	120	12C	+9.31
C/L Special I			VOL		0.31	1	71	12C	+37.42
C/L Special I			VOL		0.34	1	58	12C	+29.21
C/L Special I			VOL		0.45	1	50	12C	+26.16
C/L Special I			VOL		0.76	1	79	12C	+20.50
C/L Special I			VOL		0.77	1	90	12C	+24.03
C/L Special I			VOL		0.79	1	116	12C	+9.43
H/L Tubesheet	21	48	MAI		0.55	1	71	TSH	-0.80
Bobbin	21	58	NQI		15.31	P 1	39	TEH	+6.70
Bobbin			NQI		20.02	P 1	61	TEH	+6.35
Bobbin	21	78	NQI		9.71	P 1	90	TEH	+3.48
Bobbin	21	81	NQI		0.35	P 1	66	03H	+0.03
Bobbin	21	98	WAR	8	0.38	P 4	0	AV1	+0.00
H/L Tubesheet			MAI		3.51	1	203	TSH	-3.57
Bobbin	21	100	NQI		2.36	P 1	49	TEH	+13.92
Bobbin	22	23	NQI		4.64	P 1	167	TEH	+15.86
Bobbin	22	39	ODI	17	0.54	4	135	07H	+15.58
H/L Special I			VOL		1.39	1	134	07H	+15.58
Bobbin	22	42	ODI	8	0.73	3	140	05H	+31.38
H/L Special I			VOL		1.08	1	121	05H	+31.38
Bobbin	22	44	WAR	9	0.31	P 4	0	AV2	+0.00
Bobbin	22	46	WAR	8	0.25	P 4	0	AV3	+0.00
Bobbin			WAR	9	0.30	P 4	0	AV2	+0.00
Bobbin	22	55	NQI		18.95	P 1	65	TEH	+13.88
Bobbin	22	83	ADI		1.49	6	70	05H	+16.15
H/L Special I			VOL		0.88	1	128	05H	+15.92
Bobbin	22	86	WAR	16	0.88	P 4	0	AV2	+0.00
Bobbin	22	91	WAR	13	0.66	P 4	0	AV1	+0.00
Bobbin	23	7	NQI		6.89	P 1	151	TEH	+6.84
Bobbin	23	10	ODI	4	1.07	4	150	11C	+12.76
C/L Special I			VOL		0.93	1	136	11C	+12.72
Bobbin	23	21	NQI		0.53	3	109	03H	+27.93
H/L Special I			VOL		2.42	1	119	03H	+27.93
Bobbin	23	24	NQI		27.39	P 1	72	TEH	+16.73
Bobbin	23	29	NQI		11.05	P 1	88	TEH	+7.50
Bobbin	23	30	ODI	9	0.29	3	139	02H	+16.63
Bobbin			ODI	17	0.20	3	131	02H	+17.10
Bobbin	23	38	ADI		0.83	6	71	04H	+20.77
Bobbin	23	42	ADI		1.61	6	48	AV1	+4.38
Bobbin			ADI		2.80	6	70	09C	+9.29
Bobbin	23	45	ODI	21	0.37	3	127	12C	+39.19
C/L Special I			VOL		0.48	1	111	12C	+37.41
Bobbin	23	46	ODI	9	1.46	4	143	03H	+30.30
H/L Special I			VOL		0.91	1	125	03H	+30.30
Bobbin	23	77	NQI		0.38	P 1	46	18C	+0.34
Bobbin	23	83	ADI		2.35	6	64	05H	+19.50
H/L Special I			VOL		1.79	1	137	05H	+19.35
Bobbin	24	14	NQI		6.42	P 1	147	TEH	+7.46
Bobbin			NQI		8.66	P 1	147	TEH	+12.94
Bobbin	24	17	ODI	16	0.52	3	132	22C	+7.92
C/L Special I			VOL		0.19	1	148	22C	+7.73
Bobbin	24	18	ODI	2	1.38	3	146	07H	+38.22
Bobbin			ODI	7	0.49	3	141	13C	+13.79
H/L Special I			VOL		1.52	1	123	08H	-6.32
Bobbin	24	20	ADI		1.07	6	75	18C	+19.56
Bobbin			NQI		0.61	3	116	18C	+17.43
C/L Special I			VOL		0.27	1	134	17C	-2.76
C/L Special I			VOL		0.49	1	93	17C	-5.00
Bobbin	24	22	NQI		6.41	P 1	101	TEH	+5.97 to +15.30
Bobbin	24	25	NQI		10.76	P 1	157	TEH	+16.82
H/L Tubesheet			SAI		8.82	1	36	TSH	-4.89
Bobbin	24	28	ODI	23	1.13	4	124	22C	+17.69
C/L Special I			VOL		0.85	1	59	21C	-3.26
Bobbin	24	36	NQI		14.72	P 1	89	TEH	+15.91
Bobbin	24	37	ADI		0.94	6	61	11C	+29.39

## ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	24	40	ODI	14	1.83	3	134	11C	+6.25
C/L Special I			VOL		0.92	1	95	11C	+6.58
Bobbin	24	46	ODI	20	0.73	3	128	16C	+9.16
C/L Special I			VOL		0.79	1	65	16C	+9.71
H/L Tubesheet	24	49	SAI		2.82	1	22	TSH	-4.00
Bobbin	24	73	ODI	32	0.56	3	113	03H	+16.63
H/L Special I			VOL		0.55	1	137	03H	+16.90
Bobbin	24	93	WAR	12	0.59	P 4	0	AV1	+0.00
Bobbin	24	99	WAR	10	0.50	P 4	0	AV1	+0.00
Bobbin	25	8	ODI	6	0.39	3	142	07H	+12.09
H/L Special I			VOL		1.46	1	163	07H	+11.65
Bobbin	25	13	NQI		8.90	P 1	112	TEH	+1.95
Bobbin	25	17	ODI	9	0.99	3	139	05H	+5.29
H/L Special I			VOL		1.08	1	116	05H	+5.20
H/L Tubesheet	25	29	SAI		3.22	1	11	TSH	-4.36
Bobbin	25	30	ODI	12	0.86	4	139	12C	+32.86
C/L Special I			VOL		0.59	1	89	11C	-12.99
Bobbin	25	34	WAR	11	0.39	P 4	0	AV2	+0.00
Bobbin	25	38	ODI	4	1.22	4	150	03H	+21.01
Bobbin			WAR	7	0.24	P 4	0	AV2	+0.00
Bobbin	25	40	WAR	7	0.22	P 4	0	AV2	+0.00
Bobbin	25	43	NQI		6.28	3	12	15C	-0.82
Bobbin	25	51	WAR	9	0.30	P 4	0	AV1	+0.00
Bobbin	25	55	NQI		7.13	P 1	133	TEH	+8.55
Bobbin	25	56	ODI	19	0.76	4	130	05H	+37.22
Bobbin	25	63	NQI		9.21	P 1	166	TEH	+7.20
Bobbin	25	74	ODI	4	0.84	3	128	22C	+11.14
C/L Special I			VOL		0.42	1	90	22C	+11.14
Bobbin	26	12	NQI		8.45	P 1	163	TEH	+16.06
Bobbin	26	25	WAR	8	0.35	P 4	0	AV1	+0.00
Bobbin	26	47	WAR	10	1.39	P 2	0	18C	+0.00
Bobbin	26	48	WAR	12	0.52	P 4	0	AV1	+0.00
Bobbin	26	61	NQI		0.70	3	105	15C	+7.33
Bobbin	26	62	NQI		0.48	3	83	10C	+28.00
Bobbin	26	67	WAR	15	0.77	P 4	0	AV2	+0.00
Bobbin	26	74	NQI		0.54	3	66	10C	+29.46
C/L Special I			VOL		0.74	1	66	09C	-14.55
Bobbin	26	83	ODI	17	1.07	4	137	10C	+27.87
Bobbin			WAR	13	0.64	P 4	0	AV4	+0.00
Bobbin			WAR	15	0.77	P 4	0	AV3	+0.00
C/L Special I			VOL		1.53	1	30	09C	-16.13
Bobbin	26	84	WAR	15	0.77	P 4	0	AV1	+0.00
Bobbin	26	103	WAR	12	0.63	P 4	0	AV1	+0.00
Bobbin	26	106	WAR	11	0.52	P 4	0	AV1	+0.00
Bobbin	27	28	NQI		8.68	P 1	125	TEH	+9.07
Bobbin	27	39	NQI		20.09	P 1	24	TEH	+1.50
Bobbin	27	44	WAR	11	0.46	P 4	0	AV1	+0.00
Bobbin			WAR	16	0.70	P 4	0	AV2	+0.00
Bobbin	27	52	NQI		17.43	P 1	68	TEH	+6.12
Bobbin	27	58	NQI		50.88	P 1	55	TEH	+1.08
Bobbin	27	61	NQI		10.21	P 1	95	TEH	+8.71
Bobbin			NQI		11.23	P 1	88	TEH	+4.89
Bobbin			NQI		32.59	P 1	85	TEH	+7.64
Bobbin	27	98	ODI	23	1.61	1	9	05H	+35.59
Bobbin			ODI	25	1.91	1	10	05H	+38.40
Bobbin			ODI	35	3.28	3	14	06H	+23.03
Bobbin			ODI	38	2.95	3	15	05H	+40.84
Bobbin			ODI	38	4.82	3	15	05H	+29.76
H/L Special I			VOL		2.33	1	21	06H	-8.97
H/L Special I			VOL		2.36	1	17	06H	-6.16
H/L Special I			VOL		3.37	1	15	06H	-3.51
H/L Special I			VOL		4.90	1	9	06H	+22.44
H/L Special I			VOL		5.80	1	18	06H	-14.70
Bobbin	27	99	WAR	20	1.19	P 4	0	AV1	+0.00
Bobbin	27	103	WAR	12	0.63	P 4	0	AV1	+0.00

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	27	106	WAR	20	1.12	P 4	0	AV1	+0.00
Bobbin	28	13	NQI		9.66	1	134	TEH	+10.13
Bobbin	28	26	WAR	13	0.47	P 4	0	AV2	+0.00
Bobbin	28	31	NQI		8.09	P 1	168	TEH	+3.33
Bobbin	28	36	WAR	9	0.30	P 4	0	AV3	+0.00
Bobbin	28	47	NQI		0.57	3	108	15C	+6.72
C/L Special I			VOL		0.88	1	131	15C	+6.87
Bobbin	28	48	WAR	15	1.25	P 4	0	AV1	+0.00
Bobbin	28	56	WAR	16	1.32	P 4	0	AV1	+0.00
Bobbin	28	57	WAR	10	0.34	P 4	0	AV1	+0.00
Bobbin	28	82	ODI	30	0.78	3	117	04H	+11.45
H/L Special I			VOL		2.11	1	127	04H	+11.98
Bobbin	28	101	WAR	11	0.57	P 4	0	AV1	+0.00
Bobbin	28	103	ODI	23	1.02	4	131	11C	+14.30
Bobbin			WAR	17	0.95	P 4	0	AV1	+0.00
C/L Special I			VOL		0.60	1	98	11C	+14.30
Bobbin	29	10	WAR	5	0.42	P 4	0	AV1	+0.00
Bobbin	29	25	ODI	16	0.32	3	130	07H	+20.74
Bobbin	29	38	NQI		2.31	P 1	106	TEH	+12.87
Bobbin	29	46	WAR	11	0.84	P 4	0	AV1	-0.13
Bobbin	29	51	WAR	20	1.87	P 4	0	AV1	+0.00
Bobbin	29	53	ODI	12	1.19	3	134	11C	+25.91
C/L Special I			VOL		0.53	1	104	11C	+25.51
Bobbin	29	57	WAR	12	0.95	P 4	0	AV1	+0.00
Bobbin	29	60	WAR	11	0.57	P 4	0	AV1	+0.00
Bobbin	29	63	WAR	13	0.68	P 4	0	AV1	+0.00
H/L Tubesheet	29	86	SAI		0.49	1	24	TSH	+0.17
Bobbin	29	91	ODI	28	1.86	3	120	06H	+36.59
H/L Special I			VOL		3.11	1	112	07H	-8.39
Bobbin	29	92	WAR	13	0.66	P 4	0	AV1	+0.00
Bobbin	29	95	NQI		0.65	3	56	AV1	+11.07
Bobbin	29	103	WAR	9	0.43	P 4	0	AV1	+0.00
Bobbin	29	104	WAR	21	1.24	P 4	0	AV1	+0.00
H/L Tubesheet	30	28	SAI		0.52	1	23	TSH	-2.21
Bobbin	30	43	ADI		1.13	6	57	10C	+25.71
Bobbin			WAR	12	0.42	P 4	0	AV1	+0.00
C/L Special I			VOL		0.81	1	77	10C	+26.05
Bobbin	30	69	WAR	9	0.42	P 4	0	AV1	+0.00
Bobbin			WAR	13	0.68	P 4	0	AV3	+0.00
Bobbin	30	76	WAR	10	0.55	P 4	0	AV3	+0.00
Bobbin	30	78	WAR	11	0.56	P 4	0	AV4	+0.00
Bobbin			WAR	13	0.64	P 4	0	AV3	+0.00
Bobbin			WAR	13	0.66	P 4	0	AV2	+0.00
Bobbin	30	83	WAR	9	0.44	P 4	0	AV1	+0.00
Bobbin	30	95	WAR	8	0.41	P 4	0	AV1	+0.00
Bobbin			WAR	14	0.75	P 4	0	AV2	+0.00
Bobbin	30	99	WAR	13	0.67	P 4	0	AV3	+0.00
Bobbin			WAR	19	1.05	P 4	0	AV1	+0.00
Bobbin	30	102	WAR	14	0.69	P 4	0	AV1	+0.00
Bobbin	30	103	WAR	16	0.84	P 4	0	AV1	+0.00
Bobbin	30	104	NQI		0.69	P 1	127	TEH	+17.37
Bobbin			WAR	13	0.67	P 4	0	AV1	+0.00
Bobbin	31	27	ADI		2.36	6	234	19C	+2.54
Bobbin			NQI		13.11	P 1	25	TEH	+10.41
C/L Special I			VOL		0.45	1	74	19C	+2.12
Bobbin	31	38	NQI		0.31	3	60	TSH	+3.81
Bobbin	31	41	ADI		1.02	6	65	12C	+8.52
Bobbin			ADI		1.28	6	60	12C	+10.55
C/L Special I			VOL		0.36	1	109	12C	+10.81
C/L Special I			VOL		0.36	1	109	12C	+10.81
Bobbin	31	44	ADI		2.18	6	38	12C	+22.11
C/L Special I			VOL		1.21	1	110	12C	+20.73
Bobbin	31	55	ODI	25	0.31	3	122	07H	+41.14
H/L Special I			VOL		0.67	1	109	08H	-2.86
Bobbin	31	67	ADI		1.51	6	65	15C	+7.17



## ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			NQI		0.23	3	95	15C	+6.51
C/L Special I			VOL		0.23	1	145	15C	+6.51
C/L Special I			VOL		0.39	1	128	15C	+7.17
H/L Tubesheet	31	70	VOL		0.53	1	98	TSH	-0.09
Bobbin	31	84	WAR	21	1.21	P 4	0	AV3	+0.00
Bobbin	31	89	NQI		0.82	3	104	04H	+27.51
H/L Special I			VOL		1.37	1	139	05H	-17.44
Bobbin	31	94	NQI		1.16	3	149	11C	+19.28
C/L Special I			VOL		0.63	1	108	11C	+19.28
Bobbin	32	20	NQI		3.67	P 1	133	TEH	+16.86
H/L Tubesheet			MAI		5.17	1	32	TSH	-4.25
Bobbin	32	28	ADI		1.16	6	46	11C	+10.74
Bobbin			ODI	15	0.66	4	138	11C	+14.89
C/L Special I			VOL		0.38	1	62	11C	+12.50
C/L Special I			VOL		0.47	1	60	11C	+16.87
Bobbin	32	30	NQI		11.86	P 1	28	TEH	+14.46
Bobbin	32	35	NQI		9.63	P 1	69	TEH	+17.21
Bobbin			NQI		82.38	P 1	57	TEH	+15.02
H/L Tubesheet			MAI		6.60	1	23	TSH	-4.11
H/L Special I			MAI		14.23	1	37	TEH	+17.21
H/L Special I			MAI		19.52	1	37	TEH	+15.02
Bobbin	32	52	ODI	18	0.28	3	129	22C	+4.22
Bobbin	32	71	ADI		2.04	6	76	12C	+34.55
C/L Special I			VOL		0.35	1	106	11C	-9.45
Bobbin	32	97	WAR	13	0.68	P 4	0	AV1	+0.00
Bobbin	33	48	NQI		0.42	3	83	TSH	+2.78
Bobbin	33	50	NQI		0.34	3	85	10C	+33.03
Bobbin	33	62	NQI		6.46	P 1	159	TEH	+13.56
H/L Tubesheet	33	65	SAI		0.75	1	25	TSH	-0.01
Bobbin	33	68	WAR	16	0.84	P 4	0	AV3	+0.00
Bobbin	33	73	WAR	7	0.32	P 4	0	AV3	+0.00
Bobbin	33	77	NQI		8.22	P 1	120	TEH	+11.77
Bobbin	33	79	NQI		2.16	P 1	41	TEH	+12.45
Bobbin			NQI		9.80	P 1	169	TEH	+15.04
Bobbin	33	81	ODI	4	0.56	3	124	12C	+37.91
C/L Tubesheet	33	91	VOL		0.28	1	116	TSC	-0.68
Bobbin	33	97	ODI	19	1.41	4	130	06H	+41.54
H/L Special I			VOL		1.36	1	104	07H	-1.72
Bobbin	33	101	WAR	10	0.50	P 4	0	AV1	+0.00
Bobbin	34	29	NQI		15.46	P 1	27	TEH	+5.19
Bobbin	34	82	WAR	16	0.87	P 4	0	AV1	+0.00
Bobbin	34	86	WAR	7	0.32	P 4	0	AV2	+0.00
Bobbin			WAR	12	0.59	P 4	0	AV1	+0.00
Bobbin	34	93	WAR	12	0.58	P 4	0	AV1	+0.00
Bobbin	35	21	ADI		1.80	6	73	22C	+8.39
C/L Special I			VOL		0.58	1	105	22C	+8.85
C/L Special I			VOL		0.58	1	137	22C	+5.22
C/L Special I			VOL		0.82	1	123	22C	+6.65
Bobbin	35	32	ODI	7	0.57	3	140	04H	-1.42
Bobbin	35	49	NQI		3.32	P 1	140	TEH	+6.21
Bobbin			NQI		6.80	P 1	102	TEH	+7.08
Bobbin	35	72	NQI		19.45	P 1	76	TEH	+11.93
Bobbin	35	79	WAR	13	0.68	P 4	0	AV2	+0.00
Bobbin	35	83	WAR	11	0.55	P 4	0	AV1	+0.00
Bobbin	35	84	ODI	14	0.71	4	126	13C	+16.04
C/L Special I			VOL		0.47	1	137	13C	+16.04
Bobbin	35	97	NQI		22.49	P 1	26	TEH	+3.06
H/L Special I			MAI		7.26	1	43	TEH	+3.66
Bobbin	36	23	ODI	10	2.26	4	137	12C	+31.16
Bobbin			ODI	12	0.61	4	135	12C	+22.98
C/L Special I			VOL		1.14	1	110	11C	-14.72
Bobbin	36	44	NQI		8.86	P 1	62	TEH	+17.97
H/L Tubesheet			SAI		9.48	1	20	TSH	-3.42
Bobbin	36	49	ADI		1.19	6	78	03H	+8.15
Bobbin			ADI		1.37	6	80	05H	+3.96

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Special I					VOL			0.98 1 129 05H	+3.96 05H
H/L Special I					VOL			1.07 1 52 03H	+8.15 03H
Bobbin	36	53	NQI		2.21	P 1	32	TEH	+14.32 F/L
Bobbin	36	63	NQI		14.78	P 1	83	TEH	+14.44 F/L
Bobbin	36	67	ADI		0.83	6	67	06H	+30.55 F/L
Bobbin			WAR	7	0.35	P 4	0	AV2	+0.00 F/L
Bobbin			WAR	16	0.85	P 4	0	AV1	+0.00 F/L
H/L Special I					VOL			2.10 1 8 07H	-13.23 07H
Bobbin	36	86	ADI		1.95	6	75	06H	+6.54 F/L
H/L Special I					VOL			1.64 1 134 06H	+7.36 06H
H/L Special I					VOL			1.74 1 131 06H	+7.26 06H
Bobbin	36	88	WAR	13	0.68	P 4	0	AV1	+0.00 F/L
Bobbin	37	45	NQI		11.54	P 1	30	TEH	+12.50 F/L
Bobbin	37	60	ADI		2.75	6	73	11C	+40.92 F/L
C/L Special I					VOL			0.87 1 106 10C	-3.84 10C
Bobbin	37	62	ADI		4.36	6	123	AV1	-1.24 F/L
U-Bend					VOL			0.68 1 73 AV1	-1.19 08H
Bobbin	37	70	ODI	18	0.48	3	119	07H	+4.76 F/L
H/L Special I					VOL			1.03 1 95 07H	+4.64 07H
Bobbin	37	88	NQI		0.67	3	95	18C	+14.56 F/L
C/L Special I					VOL			0.55 1 51 18C	+14.56 18C
Bobbin	37	98	NQI		0.77	P 1	106	16C	-0.33 F/L
C/L Special I					VOL			0.37 P 1 85 16C	-0.30 16C
Bobbin	38	19	ADI		1.43	6	65	14C	+9.03 F/L
C/L Special I					VOL			2.11 1 109 14C	+10.39 13C
Bobbin	38	21	ADI		1.66	6	81	10C	+20.74 F/L
C/L Special I					VOL			0.40 1 119 10C	+22.68 10C
C/L Special I					VOL			0.54 1 121 10C	+21.25 10C
Bobbin	38	35	NQI		18.88	P 1	78	TEH	+11.04 F/L
Bobbin	38	41	NQI		11.79	P 1	38	TEH	+2.59 F/L
Bobbin	38	45	NQI		9.00	P 1	169	TEH	+7.60 F/L
Bobbin			NQI		12.91	P 1	36	TEH	+10.52 F/L
Bobbin			NQI		21.54	P 1	40	TEH	+9.49 F/L
Bobbin	38	49	ADI		0.97	6	78	05H	+17.52 F/L
Bobbin			ADI		2.90	6	73	05H	+21.11 F/L
H/L Special I					VOL			0.71 1 127 05H	+18.95 05H
H/L Special I					VOL			0.97 1 127 05H	+17.52 05H
H/L Special I					VOL			2.54 1 120 05H	+21.11 05H
Bobbin	38	50	NQI		0.33	3	124	22C	+18.02 F/L
Bobbin			NQI		0.35	3	115	18C	+12.15 F/L
Bobbin			NQI		0.45	3	83	07H	+23.82 F/L
Bobbin			WAR	10	1.30	P 2	0	18C	+0.15 F/L
C/L Special I					VOL			0.66 1 103 18C	+12.22 18C
H/L Special I					VOL			0.88 1 119 07H	+23.82 07H
Bobbin	38	51	NQI		1.63	P 1	64	TEH	+13.33 F/L
Bobbin	38	52	NQI		7.06	P 1	144	TEH	+13.10 F/L
Bobbin	38	55	WAR	11	1.45	P 2	0	18C	+0.00 F/L
Bobbin			WAR	22	0.97	P 4	0	AV1	+0.00 F/L
Bobbin	38	57	NQI		10.38	P 1	66	TEH	+14.09 F/L
Bobbin	38	59	WAR	22	1.32	P 4	0	AV3	+0.00 F/L
Bobbin	38	63	NQI		16.95	P 1	17	TEH	+7.90 F/L
Bobbin	38	76	NQI		7.11	P 1	140	TEH	+14.55 F/L
Bobbin	38	80	ADI		2.08	6	73	18C	+8.32 F/L
C/L Special I					VOL			0.89 1 148 18C	+8.74 18C
Bobbin	38	83	ADI		2.00	6	78	07H	+11.33 F/L
H/L Special I					VOL			1.37 1 104 07H	+12.65 07H
Bobbin	38	89	NQI		0.31	3	85	10C	+8.02 F/L
Bobbin	38	91	NQI		14.87	P 1	84	TEH	+7.56 F/L
Bobbin			NQI		16.32	P 1	76	TEH	+2.29 F/L
Bobbin			NQI		25.72	P 1	70	TEH	+11.40 F/L
Bobbin	38	94	NQI		0.36	3	55	01H	+17.40 F/L
H/L Special I					VOL			1.12 1 133 02H	-1.53 02H
Bobbin	38	96	NQI		0.31	3	97	11C	+22.91 F/L
C/L Special I					VOL			0.41 1 108 11C	+24.26 10C
C/L Special I					VOL			0.54 1 102 11C	+21.15 10C

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION		EXTENT1
Bobbin	39	18	WAR	14	0.50	P 4	0	AV3	+0.00	F/L
Bobbin	39	19	WAR	9	0.32	P 4	0	AV4	+0.08	F/L
Bobbin			WAR	24	1.05	P 4	0	AV2	+0.40	F/L
Bobbin	39	32	NQI		27.15	P 1	52	TEH	+11.37	F/L
Bobbin	39	36	NQI		9.75	P 1	17	TEH	+5.84	F/L
Bobbin			NQI		9.96	P 1	69	TEH	+3.62	F/L
Bobbin	39	43	WAR	13	0.45	P 4	0	AV1	+0.00	F/L
Bobbin	39	48	ADI		1.28	6	72	10C	+10.36	F/L
C/L Special I			VOL		0.31	1	109	10C	+10.95	to +12.65
Bobbin	39	52	WAR	11	0.39	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	14	0.51	P 4	0	AV1	+0.00	F/L
Bobbin	39	57	NQI		5.56	P 1	88	TEH	+9.24	F/L
Bobbin	39	62	NQI		0.88	3	151	05H	+33.90	F/L
H/L Special I			VOL		1.08	1	83	06H	-11.16	06H
Bobbin	39	65	WAR	10	0.47	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	17	0.96	P 4	0	AV1	+0.00	F/L
Bobbin	39	67	WAR	6	0.29	P 4	0	AV1	+0.00	F/L
Bobbin	39	68	NQI		0.55	3	43	03H	+24.77	F/L
Bobbin	39	70	WAR	10	0.47	P 4	0	AV4	+0.00	F/L
Bobbin			WAR	20	1.15	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	21	1.21	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	23	1.46	P 4	0	AV1	+0.00	F/L
Bobbin	39	71	WAR	22	1.32	P 4	0	AV2	+0.00	F/L
Bobbin	39	83	NQI		0.54	3	100	06H	+31.73	F/L
Bobbin	39	84	NQI		0.29	3	84	06H	+34.79	F/L
H/L Special I			VOL		0.90	1	155	07H	-9.64	07H
Bobbin	40	24	WAR	11	0.36	P 4	0	AV3	+0.00	F/L
Bobbin	40	29	NQI		0.71	P 1	133	TEC	+14.90	F/L
U-Bend	40	32	VOL		1.83	1	155	AV2	+0.00	08H
U-Bend			VOL		3.69	1	7	AV3	+0.00	08H
Bobbin			WAR	35	2.13	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	36	2.24	P 4	0	AV3	+0.00	F/L
Bobbin	40	36	NQI		0.39	3	56	12C	+1.41	F/L
Bobbin			WAR	26	0.54	P 4	0	AV2	+0.00	F/L
C/L Special I			VOL		0.51	1	115	12C	+1.27	12C
Bobbin	40	42	WAR	13	0.44	P 4	0	AV1	+0.00	F/L
Bobbin	40	48	ODI	9	0.46	3	138	01H	+11.14	F/L
Bobbin			ODI	21	0.71	3	127	01H	+12.96	F/L
H/L Special I			VOL		4.48	1	124	01H	+10.78	01H
H/L Special I			VOL		4.51	1	138	01H	+12.42	01H
Bobbin	40	63	NQI		18.71	P 1	38	TEH	+14.83	F/L
Bobbin	40	70	WAR	9	0.41	P 4	0	AV1	+0.00	F/L
Bobbin			WAR	19	1.09	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	27	1.79	P 4	0	AV2	+0.00	F/L
Bobbin	40	73	ODI	24	0.33	3	116	03H	+37.62	F/L
Bobbin	40	84	WAR	18	0.99	P 4	0	AV1	+0.00	F/L
Bobbin	40	89	NQI		0.26	3	103	04H	+3.56	F/L
H/L Special I			VOL		0.59	1	85	04H	+3.61	04H
Bobbin	40	90	NQI		0.29	3	112	03H	+28.00	F/L
Bobbin			NQI		0.76	3	99	03H	+36.39	F/L
H/L Special I			VOL		0.74	1	129	04H	-11.44	04H
H/L Special I			VOL		1.82	1	128	04H	-7.99	04H
Bobbin	40	92	NQI		0.44	3	52	12C	+26.58	F/L
Bobbin	40	93	ADI		0.95	6	73	12C	+16.18	F/L
Bobbin			ADI		1.67	6	78	02H	+10.16	F/L
H/L Special I			VOL		1.36	1	15	02H	+11.24	02H
Bobbin	40	96	NQI		0.44	3	42	03H	+36.00	F/L
Bobbin			NQI		0.64	3	43	12C	+39.54	F/L
C/L Special I			VOL		0.42	1	84	11C	-4.58	11C
H/L Special I			VOL		0.86	1	127	04H	-18.01	04H
H/L Special I			VOL		0.94	1	163	04H	-8.35	04H
H/L Special I			VOL		1.00	1	112	04H	-5.79	04H
H/L Special I			VOL		1.02	1	140	04H	-3.95	04H
Bobbin	41	47	NQI		0.38	3	110	04H	+11.06	F/L
H/L Special I			VOL		1.95	1	70	04H	+10.03	04H

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS  
INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	41	48	ODI	29	0.78	4	118	11C	+21.84
C/L Special I			VOL		0.73	1	111	11C	+4.15
C/L Special I			VOL		0.82	1	103	11C	+14.79
C/L Special I			VOL		0.26	1	112	11C	+19.29 to +22.25
Bobbin	41	51	WAR	26	0.51	P 4	0	AV1	+0.00
Bobbin	41	55	WAR	24	0.93	P 4	0	AV1	+0.00
Bobbin	41	67	WAR	7	0.32	P 4	0	AV2	+0.00
Bobbin			WAR	10	0.49	P 4	0	AV3	+0.00
Bobbin	41	74	WAR	17	0.90	P 4	0	AV1	+0.00
Bobbin	41	75	NQI		11.38	P 1	35	TEH	+6.25
Bobbin	41	78	ODI	29	1.55	3	119	04H	+17.05
Bobbin			WAR	13	0.67	P 4	0	AV1	+0.00
H/L Special I			VOL		2.64	1	119	04H	+18.18
Bobbin	41	82	NQI		44.36	P 1	46	TEH	+3.50
Bobbin	41	88	NQI		15.92	P 1	36	TEH	+13.28
Bobbin	41	92	ODI	2	0.28	3	127	07H	+33.04
Bobbin	42	36	WAR	26	0.54	P 4	0	AV1	+0.00
Bobbin	42	38	NQI		0.46	3	113	11C	+30.33
Bobbin	42	42	WAR	27	0.36	P 4	0	AV1	+0.00
Bobbin	42	62	WAR	18	1.01	P 4	0	AV1	+0.00
Bobbin	42	76	NQI		10.45	P 1	15	TEC	+8.34
Bobbin			NQI		11.63	P 1	32	TEH	+7.86
Bobbin	42	78	WAR	13	0.68	P 4	0	AV1	+0.00
Bobbin	42	87	NQI		0.56	P 1	138	03H	+0.06
Bobbin	43	41	ADI		1.10	6	75	05H	+25.32
H/L Special I			VOL		0.60	1	121	05H	+24.86
Bobbin	43	44	WAR	25	0.73	P 4	0	AV1	+0.00
Bobbin	43	46	WAR	25	0.67	P 4	0	AV1	+0.00
Bobbin	43	51	ADI		0.85	6	56	22C	+11.67
C/L Special I			VOL		0.40	1	102	22C	+12.35
C/L Special I			VOL		0.42	1	55	22C	+10.90
Bobbin	43	68	NQI		13.17	P 1	30	TEH	+12.60
Bobbin	43	71	NQI		20.52	P 1	28	TEH	+2.73
Bobbin	43	88	NQI		6.95	P 1	16	TEH	+8.89
Bobbin	43	93	WAR	16	0.89	P 4	0	AV1	+0.00
Bobbin	44	31	NQI		0.57	3	101	15C	+8.75
C/L Special I			VOL		0.52	1	167	13C	+0.45
C/L Special I			VOL		0.72	1	102	15C	+10.01
C/L Special I			VOL		0.76	1	109	13C	-13.57
Bobbin	44	56	NQI		0.79	P 1	127	09C	-0.40
C/L Special I			VOL		0.28	1	97	09C	-0.52
Bobbin	44	57	NQI		32.61	P 1	54	TEH	+14.21
Bobbin	44	58	ADI		1.16	6	91	11C	+22.68
Bobbin			ODI	13	0.73	4	139	11C	+14.48
C/L Special I			VOL		0.51	1	115	11C	+14.13
C/L Special I			VOL		0.76	1	85	11C	+22.72
Bobbin	44	61	NQI		14.15	P 1	30	TEH	+10.50
Bobbin			NQI		28.70	P 1	80	TEH	+8.47
Bobbin	44	63	NQI		17.27	P 1	27	TEH	+8.04
H/L Tubesheet	44	73	SAI		0.35	1	42	TSH	-1.07
Bobbin	44	75	NQI		7.98	P 1	38	TEH	+7.70
Bobbin	44	84	NQI		2.49	P 1	34	TEH	+4.82
Bobbin	45	28	ODI	9	0.63	3	138	10C	+28.58
C/L Special I			VOL		0.29	1	109	10C	+29.39
C/L Special I			VOL		1.59	1	124	10C	+28.68
Bobbin	45	31	NQI		8.77	P 1	16	TEH	+17.24
Bobbin	45	51	NQI		60.69	P 1	43	TEH	+14.89
Bobbin	45	72	ADI		1.78	6	77	02H	+4.48
H/L Special I			VOL		1.39	1	138	02H	+4.48
Bobbin	46	41	WAR	12	0.43	P 4	0	AV1	+0.00
Bobbin	46	47	NQI		0.56	3	111	05H	+29.79
H/L Special I			VOL		2.58	1	132	06H	-13.37
Bobbin	46	63	NQI		1.35	P 1	157	10C	-0.39
C/L Special I			VOL		0.71	1	144	10C	-0.41
Bobbin	46	67	NQI		0.39	3	91	12C	+21.73

ATTACHMENT #5 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGA

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			WAR	11	0.55	P 4	0	AV1	+0.00
C/L Special I			VOL		0.25	1	71	12C	+21.66
Bobbin	46	77	WAR	8	0.38	P 4	0	AV1	+0.00
Bobbin	47	57	NQI		11.47	P 1	25	TEH	+7.93
Bobbin	47	66	ODI	10	0.74	3	132	03H	+17.07
H/L Special I			VOL		1.52	1	128	03H	+17.07
Bobbin	47	87	NQI		0.25	P 1	107	03H	+0.06
Bobbin	48	50	NQI		0.34	P 1	102	06H	+0.19
Bobbin	48	53	ODI	5	0.89	4	134	11C	+27.18
Bobbin			ODI	10	0.76	4	127	07H	+29.83
C/L Special I			VOL		0.93	1	112	11C	+28.02
H/L Special I			VOL		6.47	1	123	08H	-13.42
Bobbin	49	49	NQI		0.46	P 1	128	06H	+0.19
Bobbin	49	54	NQI		0.71	P 1	39	06H	+0.16
Bobbin	49	64	NQI		0.54	3	111	05H	+16.77
H/L Special I			VOL		1.24	1	117	05H	+16.77
Bobbin	49	71	NQI		33.04	P 1	20	TEH	+3.56 to +5.40
Bobbin	49	74	WAR	14	1.47	P 2	0	15C	+0.00
Bobbin			NQI		1.40	P 1	127	TEH	+4.10 to +8.63

Total Indications Found = 799  
 Total Tubes Found = 456

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	2	46	NQI		14.61	P 1	17	TEH	+12.57	09C
H/L Tubesheet	2	55	MAI		0.77	1	25	TSH	-1.19	TSH
Bobbin			NQI		10.23	P 1	19	TEH	+20.30	09C
H/L Special I			SAI		0.49	1	31	TEH	+19.85	TSH
H/L Tubesheet	2	56	SAI		0.57	1	16	TSH	-0.04	TSH
H/L Tubesheet	2	70	MAI		0.26	1	40	TSH	-2.25	TSH
Bobbin	2	84	NQI		31.86	P 1	12	TEH	+3.41	09C
Bobbin	3	12	NQI		1.05	P 1	52	03H	+0.00	09C
H/L Special I			MAI		0.45	1	55	03H	+0.00	03H
Bobbin	3	16	ODI	25	3.70	3	123	10C	+2.26	09C
Bobbin			ODI	31	2.54	3	118	10C	+1.72	09C
C/L Special I			VOL		2.09	1	63	10C	+1.72	10C
H/L Tubesheet	3	63	SAI		0.35	1	42	TSH	+0.00	TSH
Bobbin	3	86	ADI		2.82	6	73	12C	+5.38	09C
C/L Special I			VOL		0.59	1	119	12C	+14.86	12C
C/L Special I			VOL		0.87	1	112	12C	+5.17	12C
C/L Special I			VOL		0.88	1	107	12C	+3.11	12C
Bobbin	3	107	ADI		2.65	6	76	01H	+5.56	09C
Bobbin	4	12	ODI	20	0.56	3	127	13C	+4.73	09C
C/L Special I			VOL		0.32	1	110	13C	+4.73	13C
Bobbin	4	20	ADI		4.63	6	47	04H	+9.70	09C
H/L Special I			VOL		1.34	1	129	04H	+5.31	04H
H/L Special I			VOL		1.44	1	131	04H	+9.52	04H
Bobbin	4	23	ODI	19	1.22	4	130	12C	+39.87	09C
C/L Special I			VOL		0.92	1	34	11C	-4.84	11C
H/L Tubesheet	4	64	SAI		0.55	1	63	TSH	+0.00	TSH
H/L Tubesheet	4	67	SAI		0.67	1	37	TSH	+0.00	TSH
Bobbin	4	73	NQI		13.76	P 1	20	TEH	+15.10	09C
H/L Special I			MAI		1.13	1	26	TEH	+15.43	TSH
H/L Tubesheet	4	84	SAI		0.91	1	45	TSH	-1.07	TSH
Bobbin	4	97	ADI		5.26	6	81	02H	+22.06	09C
H/L Special I			VOL		0.83	1	116	02H	+22.75	03H
H/L Tubesheet	4	108	SAI		0.18	2	41	TSH	-4.32	TSH
H/L Tubesheet			SAI		1.02	1	19	TSH	-5.38	TSH
Bobbin	5	23	NQI		1.21	3	59	12C	+2.71	09C
H/L Tubesheet	5	42	MAI		0.39	1	15	TSH	-3.13	TSH
Bobbin			NQI		13.76	P 1	20	TEH	+18.17	10C
Bobbin	5	71	NQI		0.73	P 1	51	20C	-0.74	09C
C/L Special I			VOL		0.74	1	18	20C	-0.96	20C
H/L Tubesheet	5	106	SAI		0.15	2	42	TSH	-0.08	TSH
Bobbin	6	42	ADI		2.36	6	83	12C	+35.89	F/L
Bobbin			ADI		2.46	6	63	12C	+20.23	F/L
Bobbin			NQI		0.35	3	90	11C	+2.65	F/L
Bobbin			NQI		0.38	3	114	12C	+28.11	F/L
C/L Special I			VOL		0.47	1	119	12C	+19.56	11C
C/L Special I			VOL		0.50	1	116	12C	+10.56	11C
C/L Special I			VOL		0.61	1	35	12C	+27.93	11C
C/L Special I			VOL		0.77	1	27	12C	+35.16	11C
C/L Special I			VOL		1.09	1	31	12C	+22.69	11C
Bobbin	6	43	NQI		0.34	P 1	52	14C	+0.07	F/L
Bobbin	6	45	ADI		2.35	6	69	10C	+25.59	F/L
Bobbin			NQI		0.65	3	96	10C	+8.57	F/L
Bobbin			ODI	6	1.50	4	146	10C	+18.36	F/L
C/L Special I			VOL		0.67	1	30	10C	+17.89	09C
C/L Special I			VOL		0.74	1	16	10C	+27.07	09C
C/L Special I			VOL		1.21	1	158	10C	+25.24	09C
Bobbin	6	46	NQI		1.40	3	134	17C	+5.62	F/L
H/L Tubesheet	6	63	MAI		1.49	1	5	TSH	-0.10	TSH
H/L Tubesheet	6	64	MAI		0.20	2	29	TSH	-0.14	TSH
Bobbin	6	69	NQI		10.36	P 1	16	TEH	+8.57	F/L
Bobbin	6	70	NQI		16.63	P 1	20	TEH	+7.49	F/L
Bobbin	6	77	NQI		13.01	P 1	24	TEH	+6.45	F/L
Bobbin	7	2	NQI		0.90	P 1	40	02H	+0.00	F/L
Bobbin	7	12	NQI		8.36	P 1	14	TEH	+20.06	F/L
Bobbin	7	51	NQI		6.11	P 1	152	TEH	+13.26	F/L

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			NQI		16.96	P 1	18	TEH	+12.35
H/L Special I			SAI		0.76	1	30	TEH	+6.06
H/L Special I			SAI		4.08	1	36	TEH	+12.43
Bobbin	7	56	NQI		16.59	P 1	147	TEH	+12.11
H/L Special I			MAI		4.14	1	36	TEH	+12.08
Bobbin	7	67	ODI	29	0.43	3	121	03H	+30.92
H/L Special I			VOL		0.51	1	139	03H	+30.59
Bobbin	7	91	ODI	13	0.98	3	131	05H	+15.23
H/L Special I			VOL		1.02	1	94	05H	+16.06
Bobbin	7	94	NQI		11.12	P 1	70	TEH	+15.86
Bobbin	7	97	NQI		17.34	P 1	21	TEH	+3.79
Bobbin	8	27	NQI		11.01	P 1	37	TEH	+11.43
Bobbin	8	56	ODI	24	1.10	3	122	22C	+9.56
C/L Special I			VOL		2.12	1	138	22C	+9.65
H/L Tubesheet	8	59	MAI		0.90	1	40	TSH	-0.10
H/L Tubesheet	8	75	SAI		0.37	1	80	TSH	-0.23
Bobbin	8	78	ODI	12	1.95	3	133	04H	+15.72
H/L Special I			VOL		2.78	1	118	04H	+15.67
Bobbin	9	7	ADI		3.32	6	106	10C	+10.87
Bobbin			ODI	31	1.62	4	110	15C	+2.00
C/L Special I			VOL		1.17	1	110	10C	+10.42
C/L Special I			VOL		2.08	1	116	15C	+1.70
Bobbin	9	9	ODI	17	0.67	3	127	12C	+40.23
C/L Special I			VOL		1.47	1	152	11C	-3.84
Bobbin	9	34	ODI	26	0.74	3	121	22C	+2.54
Bobbin	9	75	NQI		0.76	3	121	03H	+10.50
H/L Special I			VOL		0.43	1	146	03H	+12.70
H/L Special I			VOL		0.98	1	101	03H	+10.27
Bobbin	9	98	ADI		3.01	6	80	01H	+7.24
H/L Special I			VOL		1.67	1	170	01H	+7.27
Bobbin	9	103	ADI		2.31	6	79	03H	+25.19
Bobbin	9	104	ADI		2.55	6	90	03H	+30.61
H/L Special I			VOL		1.04	1	153	04H	-14.41
Bobbin	9	108	NQI		25.24	P 1	62	TEH	+15.06
Bobbin	10	24	ODI	9	1.78	3	132	TSC	+6.69
C/L Special I			VOL		0.85	1	141	TSC	+6.15
Bobbin	10	60	NQI		0.92	3	140	12C	+8.19
C/L Special I			VOL		0.89	1	112	12C	+8.10
H/L Tubesheet	10	65	SAI		0.45	1	28	TSH	-2.12
Bobbin	10	66	ADI		1.18	6	80	06H	+15.98
H/L Special I			VOL		1.00	1	135	06H	+15.83
Bobbin	10	67	NQI		17.93	P 1	28	TEH	+2.81
Bobbin	10	68	ODI	28	0.47	4	125	05H	+34.37
Bobbin			ODI	41	0.32	4	113	05H	+31.67
H/L Special I			VOL		0.37	1	67	06H	-16.51
H/L Special I			VOL		0.41	1	140	06H	-9.63
H/L Special I			VOL		0.46	1	157	06H	-12.33
H/L Special I			VOL		0.50	1	121	06H	-14.30
H/L Tubesheet	10	74	SAI		0.62	1	18	TSH	+0.00
Bobbin	10	79	ODI	16	1.66	4	135	07H	+11.29
H/L Special I			VOL		1.13	1	119	07H	+10.97
Bobbin	10	96	ADI		2.49	6	81	04H	+13.45
Bobbin			ODI	19	1.03	3	128	04H	+8.79
H/L Special I			VOL		1.21	1	98	04H	+13.98
H/L Special I			VOL		1.47	1	116	04H	+9.44
Bobbin	10	98	ADI		1.45	6	86	07H	+34.62
Bobbin			ODI	20	1.53	4	132	04H	+30.61
H/L Special I			VOL		0.64	1	15	08H	-10.49
H/L Special I			VOL		1.00	1	118	05H	-14.27
Bobbin	10	113	ADI		0.93	6	74	12C	+3.56
Bobbin			NQI		0.56	3	86	12C	+8.16
C/L Special I			VOL		0.42	1	144	12C	+7.58
C/L Special I			VOL		0.49	1	126	12C	+3.51
Bobbin	11	12	NQI		0.50	P 1	96	02H	+0.00
H/L Special I			MAI		0.28	1	78	02H	+0.00

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	11	29	ODI	4	1.51	3	135	01H	+3.25 F/L
H/L Special I			VOL		0.92	1	84	01H	+2.51 01H
Bobbin	11	41	ODI	15	0.55	3	128	22C	+8.46 F/L
Bobbin	11	48	NQI		7.00	P 1	128	TEH	+2.07 F/L
Bobbin			NQI		10.17	P 1	98	TEH	+5.12 F/L
Bobbin			NQI		29.65	P 1	62	TEH	+3.99 F/L
H/L Special I			MAI		5.18	1	42	TEH	+4.16 TSH
H/L Special I			MAI		11.83	1	27	TEH	+3.47 TSH
H/L Special I			SAI		9.87	1	31	TEH	+1.53 TSH
Bobbin	11	52	ODI	9	0.92	3	132	11C	+18.43 F/L
C/L Special I			VOL		1.27	1	152	11C	+18.35 11C
H/L Tubesheet	11	59	SAI		1.06	1	16	TSH	+0.06 TSH
Bobbin	11	68	ODI	51	0.55	P 1	101	02H	-0.03 F/L
H/L Special I			SAI		0.81	1	44	02H	-0.04 02H
H/L Tubesheet	11	70	MAI		4.99	1	30	TSH	-5.08 TSH
Bobbin			NQI		5.60	P 1	140	TEH	+16.88 F/L
Bobbin	11	71	ADI		2.15	6	74	04H	+18.12 F/L
H/L Special I			VOL		0.78	1	108	04H	+18.15 04H
Bobbin	11	77	NQI		29.17	P 1	61	TEH	+10.04 F/L
Bobbin	11	87	ADI		1.59	6	87	03H	+30.44 F/L
Bobbin			ODI	5	0.47	3	138	11C	+14.49 F/L
C/L Special I			VOL		0.46	1	169	11C	+15.32 11C
H/L Special I			VOL		0.19	1	63	04H	-13.88 04H
Bobbin	11	89	ODI	34	1.16	3	116	11C	-1.23 F/L
C/L Special I			VOL		1.18	1	105	11C	-1.69 11C
Bobbin	11	90	ODI	16	0.56	3	130	06H	+40.34 F/L
H/L Special I			VOL		0.51	1	48	07H	-3.98 07H
Bobbin	11	92	ADI		1.25	6	59	04H	+20.84 F/L
Bobbin			ODI	11	0.39	3	134	06H	+32.29 F/L
H/L Special I			VOL		0.22	1	43	04H	+21.24 05H
H/L Special I			VOL		0.45	1	139	07H	-12.68 07H
Bobbin	11	99	ODI	15	0.60	3	131	12C	+40.68 F/L
C/L Special I			VOL		0.74	1	112	11C	-3.98 11C
Bobbin	11	113	ODI	9	1.30	4	141	02H	+12.20 F/L
H/L Special I			VOL		0.50	1	139	02H	+9.76 02H
H/L Special I			VOL		1.16	1	123	02H	+12.31 02H
Bobbin	12	15	NQI		0.56	P 1	123	04H	+0.05 F/L
H/L Special I			SAI		0.39	1	50	04H	-0.05 04H
Bobbin	12	40	ADI		6.97	6	83	11C	+28.50 F/L
C/L Special I			VOL		1.98	1	141	11C	+28.51 10C
Bobbin	12	42	NQI		0.55	3	103	14C	+8.10 F/L
C/L Special I			VOL		0.77	1	14	14C	+8.11 13C
Bobbin	12	45	ODI	14	0.53	3	129	07H	+22.12 F/L
H/L Special I			VOL		0.37	1	121	08H	-22.82 08H
H/L Special I			VOL		0.91	1	20	08H	-20.90 08H
Bobbin	12	48	ODI	4	0.79	3	135	12C	+40.07 F/L
Bobbin			ODI	15	1.16	3	128	04H	+8.40 F/L
C/L Special I			VOL		0.63	1	57	11C	-4.05 11C
H/L Special I			VOL		0.61	1	124	04H	+7.98 04H
Bobbin	12	58	NQI		0.43	3	73	18C	+8.48 F/L
C/L Special I			VOL		0.36	1	120	18C	+8.40 18C
Bobbin	12	69	ODI	78	0.31	P 1	70	04H	+0.10 F/L
H/L Special I			SAI		0.45	1	50	04H	+0.06 04H
Bobbin	12	74	ODI	11	0.80	4	139	11C	+31.36 F/L
C/L Special I			VOL		0.83	1	38	10C	-12.96 10C
Bobbin	12	75	NQI		26.50	P 1	66	TEH	+9.26 F/L
Bobbin	12	96	NQI		0.37	P 1	117	03H	+0.16 F/L
H/L Special I			SAI		0.07	1	93	03H	+0.19 03H
Bobbin	12	112	NQI		23.49	P 1	112	TEH	+16.11 F/L
Bobbin	13	38	NQI		3.51	P 1	119	TEH	+12.07 F/L
H/L Special I			SAI		4.30	1	40	TEH	+11.59 TSH
Bobbin	13	53	ODI	12	0.99	3	130	18C	+8.15 F/L
C/L Special I			VOL		0.48	1	95	18C	+8.31 18C
Bobbin	13	72	NQI		0.48	P 1	107	03H	+0.08 F/L
H/L Special I			SAI		0.53	1	84	03H	+0.13 03H



## ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	14	17	NQI		5.08	P 1	155	TSC	-1.27
Bobbin	14	44	NQI		9.46	P 1	119	TEH	+17.02
H/L Special I			MAI		4.01	1	25	TEH	+16.80
H/L Special I			SAI		1.75	1	33	TEH	+5.68
Bobbin	14	46	ADI		2.60	6	65	17C	+6.88
C/L Special I			VOL		0.71	1	132	17C	+6.69
Bobbin	14	110	NQI		12.50	P 1	21	TEH	+10.31
Bobbin	15	27	ODI	27	0.65	3	120	06H	+10.18
H/L Special I			VOL		1.10	1	144	06H	+10.59
Bobbin	15	39	ODI	31	0.69	3	117	22C	+13.59
Bobbin	15	52	ADI		2.59	6	77	11C	+16.44
C/L Special I			VOL		0.67	1	79	11C	+15.96
H/L Tubesheet	15	64	MAI		2.43	1	25	TSH	-3.19
H/L Tubesheet			SCI		0.62	1	91	TSH	-0.01
Bobbin			NQI		14.61	P 1	26	TEH	+18.26
Bobbin	15	76	ADI		2.27	6	72	06H	+30.49
Bobbin			ODI	3	0.61	3	139	06H	+31.96
Bobbin			ODI	3	0.82	3	139	06H	+33.23
H/L Special I			VOL		0.76	1	117	07H	-10.79
H/L Special I			VOL		0.77	1	95	07H	-12.25
H/L Special I			VOL		1.61	1	104	07H	-14.12
Bobbin	15	79	ODI	1	0.37	3	141	05H	+8.10
Bobbin			ODI	13	0.34	3	132	05H	+4.48
Bobbin			ODI	15	0.45	3	131	05H	+13.24
H/L Tubesheet	15	96	SAI		0.47	1	12	TSH	-0.03
Bobbin	15	101	ODI	6	0.82	3	137	03H	+22.64
H/L Special I			VOL		0.38	1	117	03H	+22.65
Bobbin	15	102	ODI	11	1.33	3	134	15C	+3.43
C/L Special I			VOL		0.81	1	121	15C	+3.27
Bobbin	15	105	ADI		2.31	6	54	04H	+22.91
H/L Special I			VOL		0.94	1	51	04H	+22.40
Bobbin	15	110	NQI		0.61	P 1	81	03H	-0.08
H/L Special I			MAI		0.37	1	94	03H	-0.08
Bobbin	16	17	NQI		6.07	P 1	35	TEC	+4.17
Bobbin	16	38	NQI		1.25	3	52	16C	-1.38
Bobbin			NQI		2.07	3	39	16C	+1.70
Bobbin	16	51	ADI		3.88	6	58	12C	+22.85
Bobbin			ADI		4.65	6	94	16C	+1.30
Bobbin			NQI		0.69	P 1	136	05H	+0.08
H/L Special I			VOL		0.28	1	108	05H	+0.10
Bobbin	16	57	NQI		2.05	P 1	55	TEH	+4.11
Bobbin	16	59	NQI		20.46	P 1	21	TEH	+8.52
Bobbin	16	67	NQI		20.71	P 1	12	TEH	+11.23
Bobbin	16	76	NQI		14.73	P 1	23	TEH	+6.69
Bobbin	16	97	NQI		16.76	P 1	30	TEH	+2.50
Bobbin	16	98	ADI		1.86	6	66	03H	+13.93
H/L Special I			VOL		0.74	1	57	03H	+13.96
Bobbin	16	105	ADI		0.94	6	79	13C	+18.21
C/L Special I			VOL		0.37	1	146	13C	+17.35
Bobbin	17	11	NQI		1.12	3	127	05H	+31.12
H/L Special I			VOL		2.15	1	124	06H	-12.41
Bobbin	17	15	ADI		1.08	6	83	16C	+1.33
C/L Special I			SAI		1.53	1	31	16C	+1.15
Bobbin	17	45	NQI		6.41	P 1	20	TEH	+7.05
H/L Special I			VOL		1.50	1	27	TEH	+6.83
Bobbin	17	61	NQI		6.10	P 1	152	TEH	+7.72
H/L Tubesheet	17	74	SAI		6.66	1	44	TSH	-4.68
Bobbin			NQI		10.77	P 1	54	TEH	+17.10
Bobbin	17	109	NQI		5.92	P 1	97	TEH	+14.15
Bobbin	18	10	NQI		0.40	3	114	04H	+25.65
H/L Special I			VOL		1.47	1	166	05H	-18.12
C/L Tubesheet	18	12	VOL		0.32	1	108	TSC	+0.33
H/L Tubesheet	18	71	MAI		7.18	1	43	TSH	-3.99
Bobbin			NQI		16.86	P 1	44	TEH	+17.52
H/L Tubesheet	18	103	MAI		9.70	1	34	TSH	-3.52

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

EXTENT1\*

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION		EXTENT1*
Bobbin			NQI		32.19	P 1	68	TEH	+17.87	F/L
Bobbin	19	6	ADI		1.13	6	70	12C	+14.84	F/L
Bobbin			ADI		2.17	6	61	13C	+16.41	F/L
Bobbin			NQI		0.75	3	83	06H	+39.09	F/L
C/L Special I			VOL		0.72	1	111	12C	+14.34	12C
H/L Special I			VOL		1.60	1	140	07H	-5.69	07H
C/L Special I			VOL		1.17	1	107	12C	+19.77	12C
Bobbin	19	8	NQI		0.52	3	72	11C	+1.65	F/L
Bobbin	19	12	NQI		7.18	P 1	22	TEH	+14.18	F/L
Bobbin	19	23	NQI		9.15	P 1	88	TEH	+10.63	F/L
H/L Special I			MAI		5.77	1	34	TEH	+10.40	TSH
H/L Tubesheet	19	52	SAI		0.41	1	42	TSH	+0.07	TSH
Bobbin	19	88	ODI	27	0.74	4	133	03H	+9.34	F/L
Bobbin	19	91	ODI	20	1.22	4	138	03H	+3.54	F/L
Bobbin			ODI	23	1.25	4	136	03H	+11.85	F/L
H/L Special I			VOL		0.48	1	82	03H	+11.95	03H
H/L Special I			VOL		0.63	1	144	03H	+3.70	03H
Bobbin	19	97	ADI		1.73	6	76	18C	+13.51	F/L
C/L Special I			VOL		0.40	1	107	17C	-8.48	17C
Bobbin	20	6	ODI	12	0.62	3	130	14C	-0.97	F/L
C/L Special I			VOL		0.30	1	159	14C	-1.04	14C
Bobbin	20	9	NQI		1.05	3	125	TSH	+4.25	F/L
Bobbin	20	15	ADI		2.26	6	69	15C	+6.52	F/L
C/L Special I			VOL		0.47	1	132	15C	+7.74	14C
C/L Special I			VOL		1.07	1	127	15C	+6.54	14C
Bobbin	20	28	ADI		1.55	6	63	11C	+8.72	F/L
C/L Special I			VOL		0.88	1	118	11C	+8.60	11C
Bobbin	20	30	ADI		1.90	6	69	11C	+41.14	F/L
Bobbin			ADI		2.11	6	62	11C	+39.55	F/L
C/L Special I			VOL		0.62	1	32	10C	-3.24	10C
C/L Special I			VOL		0.88	1	6	10C	-4.77	10C
Bobbin	20	39	NQI		2.69	P 1	37	TEC	+13.47	F/L
Bobbin	20	48	ADI		1.84	6	69	12C	+34.80	F/L
Bobbin	20	54	NQI		0.63	3	80	12C	+11.53	F/L
Bobbin	20	60	NQI		0.92	3	127	05H	+17.78	F/L
H/L Special I			VOL		0.78	1	80	05H	+19.40	05H
Bobbin	20	75	NQI		45.34	P 1	48	TEH	+2.86	F/L
Bobbin	20	81	NQI		6.43	P 1	150	TEH	+14.08	F/L
Bobbin	20	85	ODI	12	1.55	4	143	03H	+33.55	F/L
H/L Special I			VOL		0.85	1	140	04H	-11.22	04H
H/L Special I			VOL		1.16	1	126	04H	-15.11	04H
Bobbin	20	88	ADI		1.77	6	75	05H	+16.68	F/L
H/L Special I			VOL		0.64	1	97	05H	+17.34	05H
Bobbin	20	95	NQI		27.77	P 1	32	TEH	+7.63	F/L
Bobbin	21	7	NQI		0.43	3	57	18C	+19.25	F/L
Bobbin	21	14	NQI		2.71	P 1	97	TSC	-1.19	F/L
C/L Tubesheet	21	42	VOL		0.96	1	159	TSC	+0.00	TSC
Bobbin	21	52	NQI		44.16	P 1	23	TEH	+1.77	F/L
H/L Tubesheet	21	74	MAI		3.02	1	25	TSH	-5.45	TSH
Bobbin			NQI		34.71	P 1	35	TEH	+16.08	F/L
Bobbin	21	90	ADI		1.07	6	64	10C	+34.01	F/L
C/L Special I			VOL		0.33	1	74	09C	+0.42	09C
C/L Special I			VOL		0.36	1	115	09C	-10.32	09C
C/L Special I			VOL		0.38	1	98	09C	-16.57	09C
C/L Special I			VOL		0.45	1	27	09C	-20.04	09C
Bobbin	22	34	NQI		2.79	P 1	44	TEC	+19.39	F/L
Bobbin	22	40	NQI		3.11	P 1	142	TEC	+11.53	F/L
Bobbin			NQI		3.21	P 1	84	TEC	+5.50	F/L
Bobbin	22	73	ADI		1.18	6	63	05H	+35.30	F/L
H/L Special I			VOL		0.36	1	135	06H	-21.01	06H
H/L Special I			VOL		0.37	1	70	06H	-9.27	06H
Bobbin	22	77	NQI		4.86	P 1	21	TEC	+19.32	F/L
Bobbin	22	78	NQI		0.01	P 1	90	09C	-0.03	F/L
Bobbin	22	86	WAR	18	0.83	P 4	0	AV3	+0.00	F/L
Bobbin	22	96	NQI		8.10	P 1	19	TEH	+5.68	F/L

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	22	99	NQI		0.73	P 1	9	03H	-0.05
Bobbin	22	106	ADI		1.53	6	69	03H	+8.65
H/L Special I			VOL		0.35	1	43	03H	+8.97
Bobbin	23	38	ODI	12	0.55	3	133	17C	+5.84
C/L Special I			VOL		0.96	1	106	17C	+6.25
Bobbin	23	57	ODI	12	0.38	3	133	11C	+31.71
Bobbin			ODI	32	0.83	3	118	11C	+35.17
C/L Special I			VOL		0.45	1	141	10C	-12.98
C/L Special I			VOL		0.66	1	109	10C	-9.45
Bobbin	23	58	WAR	23	1.22	P 4	0	AV3	+0.00
Bobbin	23	71	ADI		2.47	6	70	07H	+17.92
H/L Special I			VOL		1.20	1	107	07H	+18.76
Bobbin	23	92	NQI		30.70	P 1	36	TEH	+12.37
Bobbin	23	102	ODI	27	0.46	3	122	03H	+28.32
H/L Special I			VOL		0.48	1	66	04H	-15.79
C/L Tubesheet	24	52	VOL		0.66	1	119	TSC	+2.20
Bobbin	24	53	ODI	2	1.16	3	139	06H	+11.48
H/L Special I			VOL		1.32	1	127	06H	+11.62
Bobbin	24	107	ADI		0.57	4	126	03H	+6.32
Bobbin	25	10	NQI		0.45	3	105	06H	+8.90
H/L Special I			VOL		0.75	1	169	06H	+8.52
Bobbin	25	44	ADI		2.47	6	105	11C	+11.94
C/L Special I			VOL		0.96	1	111	11C	+11.75
Bobbin	25	47	ODI	12	0.64	3	133	07H	+27.32
H/L Special I			VOL		0.90	1	138	08H	-16.44
Bobbin	25	63	ODI	1	0.98	3	139	02H	+2.90
H/L Special I			VOL		0.85	1	98	02H	+3.06
H/L Tubesheet	25	68	MAI		0.32	1	26	TSH	-0.14
H/L Tubesheet	25	72	MAI		0.40	1	36	TSH	-0.09
H/L Tubesheet	25	80	SAI		0.53	1	36	TSH	-1.19
Bobbin	25	106	ODI	19	1.85	4	135	07H	+10.69
H/L Special I			VOL		1.13	1	83	07H	+10.72
Bobbin	26	8	NQI		0.50	3	110	06H	+42.40
H/L Special I			VOL		0.43	1	58	07H	-2.57
Bobbin	26	18	WAR	12	0.52	P 4	0	AV1	+0.00
Bobbin	26	34	ADI		1.64	6	61	11C	+37.42
C/L Special I			VOL		0.47	1	13	10C	-7.78
Bobbin	26	55	ODI	2	0.60	3	139	21C	+3.78
C/L Special I			VOL		0.19	1	69	21C	+4.18
H/L Tubesheet	26	59	SAI		0.51	1	40	TSH	-2.07
Bobbin	26	74	WAR	14	0.60	P 4	0	AV2	+0.00
Bobbin	26	85	ODI	20	1.29	3	126	07H	+16.86
H/L Special I			VOL		1.90	1	113	07H	+16.89
Bobbin	26	87	NQI		0.48	3	88	03H	+14.05
Bobbin	26	89	NQI		0.35	3	80	07H	+9.72
Bobbin	26	95	NQI		0.19	P 1	98	03H	+0.00
Bobbin	26	104	WAR	15	0.66	P 4	0	AV3	+0.00
Bobbin	27	27	NQI		5.93	P 1	71	TEH	+16.11
H/L Tubesheet	27	28	VOL		0.30	1	83	TSH	-3.09
H/L Tubesheet			VOL		0.54	1	113	TSH	-3.57
H/L Tubesheet			VOL		0.62	1	122	TSH	-4.38
Bobbin	27	32	ADI		1.83	6	69	11C	+22.94
Bobbin	27	37	ADI		1.97	6	75	17C	+6.54
Bobbin	27	60	ODI	24	0.75	3	123	03H	+15.26
Bobbin	27	69	NQI		10.40	P 1	24	TEH	+7.71
Bobbin			NQI		13.11	P 1	26	TEH	+8.71
Bobbin	27	74	NQI		0.63	3	108	19C	-1.29
C/L Special I			VOL		0.71	1	112	19C	-1.51
H/L Tubesheet	27	86	SCI		0.12	3	120	TSH	+0.00
Bobbin	27	96	NQI		2.40	P 1	34	TEH	+4.69
Bobbin	27	101	NQI		16.36	P 1	27	TEH	+15.46
Bobbin	27	107	NQI		0.30	P 1	72	04H	+0.00
H/L Special I			SAI		0.27	1	111	04H	-0.04
Bobbin	28	13	WAR	13	0.54	P 4	0	AV1	+0.00
Bobbin	28	16	WAR	16	0.69	P 4	0	AV1	+0.00

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	28	20	WAR	9	0.37	P 4	0	AV1	+0.00
Bobbin	28	32	ODI	28	1.54	3	122	22C	+17.02
C/L Special I			VOL		0.87	1	105	22C	+16.95
Bobbin	28	49	ADI		2.91	6	82	20C	+6.23
C/L Special I			VOL		0.79	1	112	20C	+6.91
Bobbin	28	56	NQI		0.51	3	106	02H	+5.44
H/L Special I			VOL		1.12	1	113	02H	+5.01
H/L Tubesheet	28	69	MCI		0.25	1	22	TSH	-0.08
Bobbin	28	93	NQI		13.34	P 1	10	TEH	+8.50
Bobbin	28	99	NQI		13.25	P 1	9	TSH	-1.04
Bobbin	28	100	NQI		19.94	P 1	21	TEH	+13.39
Bobbin	28	104	NQI		16.21	P 1	18	TEH	+18.07
Bobbin	28	105	WAR	9	0.37	P 4	0	AV2	+0.00
Bobbin	29	50	WAR	12	0.52	P 4	0	AV2	+0.00
Bobbin	29	71	ODI	20	0.68	3	127	04H	+24.66
H/L Special I			VOL		0.87	1	163	04H	+15.03
H/L Special I			VOL		1.09	1	136	04H	+24.71
U-Bend	30	13	VOL		0.52	1	142	AV1	+0.00
Bobbin			ODI	14	0.61	P 4	0	AV1	+0.00
Bobbin	30	45	ADI		3.15	6	62	15C	+5.71
C/L Special I			VOL		0.38	1	118	15C	+5.50
Bobbin	30	54	NQI		0.37	3	122	10C	+29.07
Bobbin	30	57	ADI		1.35	6	76	07H	+6.31
Bobbin			ADI		1.73	6	74	06H	+36.54
H/L Tubesheet			VOL		0.81	1	142	TSH	-0.94
H/L Special I			VOL		1.27	1	130	07H	-7.75
H/L Special I			VOL		1.56	1	117	07H	+6.66
Bobbin	30	77	NQI		6.42	P 1	114	TEH	+11.46
Bobbin			NQI		19.55	P 1	58	TEH	+13.29
Bobbin	30	78	NQI		52.70	P 1	52	TEH	+13.06
Bobbin	31	15	WAR	18	0.83	P 4	0	AV2	+0.00
Bobbin	31	22	NQI		0.38	3	111	03H	+11.96
H/L Special I			VOL		0.27	1	142	03H	+11.80
Bobbin	31	41	WAR	23	1.20	P 4	0	AV3	+0.00
Bobbin	31	56	NQI		5.63	P 1	172	TSC	-1.02
Bobbin	31	102	NQI		0.61	3	56	19C	+1.60
C/L Special I			VOL		0.17	1	103	19C	+1.50
Bobbin	31	104	ADI		1.13	6	48	06H	+11.80
Bobbin	32	14	ODI	9	1.21	4	139	12C	+36.82
C/L Special I			VOL		0.85	1	53	11C	-8.05
Bobbin	32	39	ADI		1.60	6	81	11C	+36.07
C/L Special I			VOL		0.91	1	135	10C	-8.90
Bobbin	32	43	ODI	12	1.47	4	137	03H	+23.72
H/L Special I			VOL		1.40	1	49	04H	-19.00
Bobbin	32	56	ODI	32	1.16	3	117	01H	+2.69
Bobbin			NQI		0.45	P 1	65	01H	+0.65
H/L Special I			VOL		0.84	1	130	01H	+2.58
H/L Tubesheet	32	60	VOL		0.72	1	166	TSH	-3.81
Bobbin	32	66	ODI	8	2.15	3	136	18C	+6.30
Bobbin			ODI	16	0.89	3	130	06H	+15.53
C/L Special I			VOL		1.30	1	102	18C	+6.06
H/L Special I			VOL		0.83	1	124	06H	+16.93
Bobbin	32	67	NQI		0.63	3	109	06H	+1.41
H/L Special I			VOL		0.29	1	119	06H	+4.25
H/L Special I			VOL		0.48	1	122	06H	+6.03
H/L Special I			VOL		0.60	1	140	06H	+3.13
H/L Special I			VOL		0.64	1	137	06H	-0.62
H/L Special I			VOL		1.40	1	151	06H	+1.45
Bobbin	32	70	ADI		1.87	6	87	04H	+6.38
H/L Special I			VOL		1.11	1	134	04H	+5.91
Bobbin	32	93	ODI	1	1.48	3	141	18C	+5.57
C/L Special I			VOL		1.03	1	104	18C	+5.70
Bobbin	33	30	NQI		0.87	3	63	10C	+36.71
C/L Special I			VOL		0.90	1	150	09C	-7.34
Bobbin	33	40	ADI		4.22	6	39	22C	+15.69

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	33	42	ADI		0.62	6	76	08H	+9.22	F/L
Bobbin	33	67	ODI	17	0.62	4	135	20C	+6.39	F/L
C/L Special I			VOL		0.28	1	148	20C	+6.91	19C
Bobbin	34	48	WAR	16	0.71	P 4	0	AV1	+0.00	F/L
Bobbin	34	55	ODI	10	0.45	3	134	01H	+8.75	F/L
Bobbin			ODI	13	0.57	3	132	01H	+9.24	F/L
Bobbin	34	68	ADI		1.84	6	58	03H	+30.81	F/L
U-Bend	34	72	VOL		1.01	1	19	09C	+19.18	AV4
Bobbin			ODI	6	0.76	3	137	09C	+19.02	F/L
Bobbin	34	76	ODI	17	0.77	3	129	02H	+14.93	F/L
Bobbin			ODI	28	0.85	3	121	02H	+18.75	F/L
H/L Special I			VOL		0.29	1	142	02H	+19.65	02H
H/L Special I			VOL		0.46	1	102	02H	+15.46	02H
H/L Special I			VOL		0.93	1	167	02H	+14.33	02H
Bobbin	34	80	NQI		18.51	P 1	18	TEH	+7.25	F/L
Bobbin			NQI		59.46	P 1	44	TEH	+9.24	F/L
H/L Tubesheet	34	95	VOL		1.30	1	167	TSH	+3.31	TSH
Bobbin	35	37	WAR	8	0.34	P 4	0	AV2	+0.00	F/L
Bobbin	35	38	ODI	7	0.58	3	135	14C	+2.42	F/L
Bobbin			ODI	10	0.70	3	133	14C	+4.56	F/L
C/L Special I			VOL		0.56	1	104	14C	+4.83	14C
C/L Special I			VOL		0.63	1	158	14C	+2.72	14C
Bobbin	35	39	ODI	6	1.71	3	136	06H	+35.73	F/L
H/L Special I			VOL		1.32	1	59	07H	-8.29	07H
Bobbin	35	44	WAR	14	0.62	P 4	0	AV1	+0.00	F/L
Bobbin	35	66	ODI	28	0.32	3	122	11C	+41.72	F/L
Bobbin	35	78	ADI		2.31	6	72	07H	+25.88	F/L
H/L Special I			VOL		0.29	1	80	07H	+13.73	07H
H/L Special I			VOL		0.66	1	99	07H	+26.21	07H
Bobbin	35	85	ODI	14	0.74	3	132	07H	+8.26	F/L
Bobbin			ODI	14	1.54	3	132	07H	+4.17	F/L
H/L Special I			VOL		0.61	1	124	07H	+8.45	07H
H/L Special I			VOL		0.92	1	105	07H	+4.22	07H
Bobbin	35	90	WAR	14	0.58	P 4	0	AV1	+0.00	F/L
Bobbin	35	98	ODI	6	1.05	3	138	11C	+31.49	F/L
C/L Special I			VOL		0.86	1	165	10C	-13.18	10C
Bobbin	36	20	WAR	15	0.69	P 4	0	AV2	+0.00	F/L
Bobbin	36	25	NQI		3.95	P 1	32	TEH	+17.10	F/L
Bobbin	36	45	NQI		5.27	P 1	46	TEH	+8.59	F/L
Bobbin	36	59	WAR	24	1.28	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	26	1.49	P 4	0	AV3	+0.00	F/L
Bobbin	36	60	WAR	14	0.57	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	33	2.47	P 4	0	AV1	+0.00	F/L
Bobbin	36	61	WAR	16	0.66	P 4	0	AV1	+0.00	F/L
Bobbin	36	65	WAR	22	1.11	P 4	0	AV1	+0.00	F/L
Bobbin	36	70	ADI		1.76	6	78	06H	+40.19	F/L
H/L Special I			VOL		0.78	1	100	07H	-4.36	07H
Bobbin	36	71	WAR	20	0.98	P 4	0	AV2	+0.00	F/L
Bobbin	36	78	NQI		0.65	3	60	AV2	+5.67	F/L
Bobbin			NQI		0.10	P 1	28	13C	+0.00	F/L
Bobbin	36	83	ADI		0.99	6	62	10C	+14.12	F/L
Bobbin			NQI		0.60	3	143	10C	+20.73	F/L
Bobbin			ODI	19	1.14	4	139	10C	+5.14	F/L
Bobbin			ODI	38	1.10	4	123	11C	+16.73	F/L
C/L Special I			VOL		0.38	1	101	10C	+13.95	10C
C/L Special I			VOL		0.41	1	85	10C	+20.34	10C
C/L Special I			VOL		0.49	1	67	10C	+5.29	10C
C/L Special I			VOL		1.23	1	88	11C	+16.85	11C
Bobbin	36	85	ADI		0.58	6	58	02H	+18.77	F/L
Bobbin	36	92	NQI		10.97	P 1	28	TEH	+9.22	F/L
Bobbin	36	94	ADI		3.22	6	72	12C	+27.47	F/L
C/L Special I			VOL		0.91	1	108	12C	+26.79	12C
Bobbin	37	17	WAR	18	0.89	P 4	0	AV3	+0.00	F/L
Bobbin	37	19	ODI	1	2.23	3	140	12C	+10.05	F/L
C/L Special I			VOL		1.79	1	104	12C	+9.90	12C

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	37	31	NQI		3.76	P 1	84	TEH	+9.80
Bobbin	37	36	WAR	16	0.73	P 4	0	AV1	+0.00
Bobbin	37	50	NQI		1.30	3	111	02H	+16.24
H/L Special I			VOL		0.70	1	102	02H	+16.15
Bobbin	37	67	ADI		1.04	6	79	04H	+21.05
H/L Special I			VOL		0.77	1	151	04H	+20.42
Bobbin	37	70	ADI		0.99	6	59	05H	+6.78
Bobbin			ADI		1.31	6	64	05H	+5.25
H/L Special I			VOL		0.87	1	126	05H	+8.04
H/L Special I			VOL		1.02	1	138	05H	+6.64
H/L Special I			VOL		1.12	1	156	05H	+5.09
Bobbin	37	80	ADI		1.98	6	76	01H	+3.81
Bobbin			ODI	8	0.91	3	138	01H	+6.46
H/L Special I			VOL		0.52	1	122	01H	+6.54
H/L Special I			VOL		1.14	1	150	01H	+3.65
Bobbin	37	81	ADI		1.77	6	81	04H	+20.83
H/L Special I			VOL		1.40	1	130	04H	+21.24
Bobbin	37	85	ODI	20	0.34	3	128	05H	+30.86
H/L Special I			VOL		0.49	1	115	06H	-13.99
Bobbin	37	97	NQI		6.23	3	176	08H	+20.36
Bobbin	38	32	WAR	18	0.83	P 4	0	AV2	+0.00
Bobbin	38	34	NQI		3.41	P 1	97	TEH	+13.78
Bobbin	38	36	NQI		3.95	P 1	40	TEH	+12.87
Bobbin			WAR	14	0.64	P 4	0	AV2	+0.00
Bobbin	38	38	NQI		10.52	P 1	33	TEH	+13.07
Bobbin	38	43	ADI		2.18	6	75	18C	+13.81
Bobbin			ADI		2.98	6	73	13C	+1.89
H/L Tubesheet			VOL		0.36	1	96	TSH	-2.59
C/L Special I			VOL		0.58	1	122	18C	+13.55
C/L Special I			VOL		0.90	1	160	18C	-0.17
C/L Special I			VOL		1.20	1	97	13C	+1.29
C/L Special I			VOL		1.33	1	168	18C	+0.21
Bobbin	38	44	ADI		1.35	6	75	15C	+4.96
Bobbin			ODI	13	1.18	4	135	10C	+21.23
C/L Special I			VOL		0.19	1	92	15C	+10.16
C/L Special I			VOL		0.26	1	103	15C	+4.50
C/L Special I			VOL		0.65	1	104	10C	+21.24
C/L Special I			VOL		0.66	1	136	15C	+8.03
Bobbin	38	51	WAR	16	0.72	P 4	0	AV1	+0.00
Bobbin	38	58	WAR	13	0.53	P 4	0	AV1	+0.00
Bobbin	38	59	WAR	24	1.39	P 4	0	AV1	+0.00
Bobbin	38	62	WAR	20	0.99	P 4	0	AV1	+0.00
Bobbin	38	64	WAR	20	0.98	P 4	0	AV1	+0.00
Bobbin	38	71	ODI	4	1.40	3	138	11C	+11.87
C/L Special I			VOL		1.38	1	113	11C	+11.49
Bobbin	38	80	ODI	21	1.78	3	126	12C	+37.54
C/L Special I			VOL		1.19	1	115	11C	-8.09
Bobbin	38	82	ODI	10	0.48	3	134	05H	+5.89
H/L Special I			VOL		0.70	1	95	05H	+6.26
Bobbin	38	87	WAR	29	1.91	P 4	0	AV3	+0.00
Bobbin	38	91	NQI		10.21	P 1	113	TEH	+13.20
Bobbin	38	92	ADI		1.29	6	63	01H	+17.24
H/L Special I			VOL		0.80	1	117	02H	-3.12
Bobbin	38	94	ODI	4	0.90	3	138	07H	-1.25
Bobbin			ODI	10	0.36	3	134	07H	+31.87
H/L Special I			VOL		0.36	1	97	07H	+17.22
H/L Special I			VOL		0.87	1	56	07H	-1.21
H/L Special I			VOL		1.27	1	113	07H	+32.66
Bobbin	38	95	NQI		24.57	P 1	22	TEH	+11.44
Bobbin	39	29	WAR	17	0.79	P 4	0	AV1	+0.00
Bobbin	39	59	ODI	13	0.90	3	132	04H	+24.96
H/L Special I			VOL		0.39	1	79	04H	+27.90
H/L Special I			VOL		0.91	1	92	04H	+25.71
Bobbin	39	74	ODI	2	0.56	3	139	10C	+39.43
C/L Special I			VOL		0.68	1	144	09C	-9.97

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	39	87	ADI		3.47	6	77	13C	+5.68
C/L Special I			VOL		0.82	1	111	13C	+5.83
Bobbin	40	24	ADI		1.95	6	80	12C	+41.19
C/L Special I			VOL		0.26	1	112	11C	-3.08
Bobbin	40	33	ODI	2	0.34	3	139	12C	+38.81
Bobbin	40	35	WAR	14	0.58	P 4	0	AV1	+0.00
Bobbin	40	48	NQI		3.46	P 1	66	TEH	+7.99
Bobbin			WAR	12	0.49	P 4	0	AV1	+0.00
Bobbin	40	52	NQI		14.72	P 1	21	TEH	+8.32
Bobbin	40	62	WAR	10	0.42	P 4	0	AV3	+0.00
Bobbin			WAR	30	2.01	P 4	0	AV2	+0.00
Bobbin	40	63	WAR	18	0.87	P 4	0	AV1	+0.00
Bobbin	40	66	WAR	25	1.47	P 4	0	AV1	+0.00
Bobbin	40	69	NQI		0.64	3	63	22C	+12.84
Bobbin			WAR	9	0.35	P 4	0	AV1	+0.00
Bobbin	40	80	WAR	11	0.46	P 4	0	AV1	+0.00
Bobbin	40	82	NQI		0.29	3	78	03H	+42.35
H/L Special I			VOL		0.84	1	39	04H	-1.84
Bobbin	40	86	ODI	12	1.63	4	138	TSH	+4.36
H/L Special I			VOL		0.17	1	46	TSH	+4.42
Bobbin	40	95	ODI	29	0.46	3	120	03H	+23.07
H/L Special I			VOL		0.22	1	20	03H	+23.52
Bobbin	41	22	NQI		1.55	3	122	05H	+6.35
H/L Special I			VOL		0.85	1	79	05H	+6.68
Bobbin	41	27	WAR	14	0.57	P 4	0	AV1	+0.00
Bobbin			WAR	18	0.84	P 4	0	AV2	+0.00
Bobbin	41	28	WAR	11	0.45	P 4	0	AV1	+0.00
Bobbin			WAR	16	0.72	P 4	0	AV2	+0.00
Bobbin			WAR	16	0.73	P 4	0	AV3	+0.00
Bobbin	41	29	WAR	16	0.70	P 4	0	AV2	+0.00
Bobbin	41	32	WAR	24	1.40	P 4	0	AV2	+0.00
Bobbin	41	35	WAR	12	0.49	P 4	0	AV1	+0.00
Bobbin	41	38	NQI		0.54	P 1	80	12C	+0.29
Bobbin			WAR	15	0.67	P 4	0	AV1	+0.00
C/L Special I			VOL		0.96	1	156	12C	+0.23
Bobbin	41	39	ODI	14	0.47	3	131	12C	+11.41
Bobbin	41	40	NQI		4.06	P 1	52	TEH	+7.56
Bobbin			NQI		5.67	P 1	29	TEH	+8.65
Bobbin			WAR	24	1.31	P 4	0	AV1	+0.00
Bobbin	41	42	WAR	12	0.49	P 4	0	AV1	+0.23
Bobbin	41	44	NQI		10.35	P 1	39	TEH	+4.14
Bobbin	41	49	NQI		7.13	P 1	32	TEH	+17.76
Bobbin			WAR	13	0.53	P 4	0	AV3	+0.00
Bobbin			WAR	15	0.63	P 4	0	AV1	+0.00
Bobbin			WAR	27	1.65	P 4	0	AV2	+0.00
H/L Tubesheet	41	53	VOL		0.79	1	154	TSH	+0.14
Bobbin	41	55	WAR	25	1.51	P 4	0	AV1	+0.00
H/L Tubesheet	41	58	SAI		1.37	1	19	TSH	-3.92
Bobbin	41	59	WAR	7	0.26	P 4	0	AV1	+0.00
Bobbin	41	61	WAR	9	0.35	P 4	0	AV1	+0.00
Bobbin	41	62	WAR	22	1.16	P 4	0	AV2	+0.00
Bobbin			WAR	24	1.31	P 4	0	AV3	+0.00
Bobbin			WAR	25	1.47	P 4	0	AV1	+0.00
Bobbin	41	68	WAR	18	0.85	P 4	0	AV2	+0.00
Bobbin			WAR	20	1.03	P 4	0	AV1	+0.00
Bobbin	41	71	ADI		2.18	6	77	01H	+12.89
Bobbin			ODI	9	1.02	4	140	04H	+16.61
H/L Special I			VOL		0.38	1	121	04H	+16.87
H/L Special I			VOL		1.50	1	162	01H	+13.00
Bobbin	41	72	ODI	39	0.31	3	112	04H	+7.28
H/L Special I			VOL		0.30	1	136	04H	+7.51
Bobbin	41	74	ADI		3.06	6	66	08H	+11.54
Bobbin	41	77	WAR	10	0.46	P 4	0	AV1	+0.00
Bobbin	42	33	ADI		3.51	6	52	15C	+17.56
C/L Special I			VOL		1.41	1	65	15C	+17.75

ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	42	47	NQI		0.37	3	85	06H	+19.28
Bobbin	42	53	WAR	14	0.62	P 4	0	AV1	+0.00
Bobbin	42	55	WAR	29	1.92	P 4	0	AV1	+0.00
Bobbin	42	82	NQI		7.88	P 1	31	TEH	+6.81
C/L Special I	43	24	VOL		0.43	1	145	12C	+0.00
Bobbin	43	37	WAR	10	0.42	P 4	0	AV1	+0.00
Bobbin	43	49	ODI	17	0.70	3	129	10C	+13.01
Bobbin			ODI	20	1.11	3	127	10C	+12.38
C/L Special I			VOL		2.24	1	98	10C	+12.75
Bobbin	43	50	WAR	21	1.10	P 4	0	AV1	+0.00
Bobbin	43	56	WAR	14	0.62	P 4	0	AV1	+0.00
Bobbin			WAR	15	0.64	P 4	0	AV3	+0.00
Bobbin			WAR	27	1.64	P 4	0	AV2	+0.00
Bobbin	43	57	WAR	11	1.41	P 2	0	17C	+0.00
Bobbin	43	63	ODI	15	0.72	3	134	17C	+13.13
Bobbin			ODI	20	0.51	3	130	17C	+13.70
C/L Special I			VOL		0.64	1	107	17C	+14.32
C/L Special I			VOL		0.80	1	111	17C	+13.72
Bobbin	43	71	NQI		7.31	P 1	29	TEH	+9.30
Bobbin	43	75	WAR	13	0.60	P 4	0	AV1	+0.00
Bobbin	43	85	ODI	21	1.24	4	130	04H	+35.57
H/L Special I			VOL		0.98	1	132	05H	-8.06
Bobbin	43	87	ODI	16	1.84	3	133	05H	+30.87
H/L Special I			VOL		0.65	1	44	05H	+15.77
H/L Special I			VOL		0.92	1	77	05H	+31.78
U-Bend	44	37	VOL		2.65	1	11	AV3	+7.76
Bobbin			ADI		1.84	6	39	AV3	+7.76
Bobbin	44	38	NQI		0.49	3	100	07H	+4.03
H/L Special I			VOL		0.66	1	61	07H	+0.58
H/L Special I			VOL		1.89	1	147	07H	+4.00
Bobbin	44	41	ADI		1.87	6	62	AV4	+29.92
Bobbin	44	44	ODI	30	1.41	3	119	10C	+16.61
C/L Special I			VOL		0.31	1	147	10C	-0.13
C/L Special I			VOL		0.75	1	112	10C	+16.53
Bobbin	44	49	NQI		0.46	P 1	89	04H	+0.00
Bobbin			WAR	18	0.85	P 4	0	AV1	+0.00
Bobbin	44	52	ADI		2.35	6	86	02H	+12.45
H/L Special I			VOL		0.42	1	102	02H	+12.44
Bobbin	44	64	ODI	10	1.64	3	138	05H	+32.67
H/L Special I			VOL		0.94	1	125	05H	+33.42
Bobbin	45	55	NQI		0.64	P 1	65	15C	+0.25
C/L Special I			VOL		0.47	P 1	83	15C	+0.32
Bobbin	45	62	NQI		0.25	P 1	64	17C	-0.10
Bobbin	45	66	ODI	19	0.90	3	128	10C	+39.80
Bobbin			ODI	27	0.67	3	122	10C	+40.23
C/L Special I			VOL		0.17	1	97	09C	-5.93
C/L Special I			VOL		0.54	1	102	09C	-4.50
Bobbin	45	68	NQI		7.34	P 1	16	TEH	+14.43
Bobbin	45	80	NQI		0.17	P 1	147	03H	+0.03
Bobbin	46	50	WAR	15	1.99	P 2	0	17C	+0.00
Bobbin	46	51	ODI	4	0.61	4	138	03H	+18.83
Bobbin			ODI	4	0.78	3	139	03H	+21.33
Bobbin			ODI	11	0.79	3	134	03H	+13.86
H/L Special I			VOL		0.76	1	140	03H	+17.29
H/L Special I			VOL		0.79	1	132	03H	+21.94
H/L Special I			VOL		1.12	1	142	03H	+14.23
Bobbin	46	57	WAR	9	1.12	P 2	0	17C	+0.00
Bobbin	46	60	ODI	11	0.32	P 1	131	17C	-0.05
Bobbin	46	71	WAR	16	0.76	P 4	0	AV1	+0.00
Bobbin	46	76	NQI		0.68	P 1	123	07H	-0.99
H/L Special I			VOL		0.89	1	57	07H	-5.66
H/L Special I			VOL		1.11	1	106	07H	-4.28
H/L Special I			VOL		1.77	1	93	07H	-1.17
H/L Special I			VOL		0.69	P 1	112	07H	+0.31
Bobbin	46	77	ODI	12	1.80	3	134	04H	+26.39



ATTACHMENT #6 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			ODI	20	0.92	3	128	04H	+31.16
H/L Special I			VOL		0.84	1	123	04H	+27.26
H/L Special I			VOL		1.21	1	142	04H	+32.15
C/L Tubesheet	47	39	VOL		4.86	1	7	TSC	+0.79
Bobbin	47	43	ADI		2.16	6	67	03H	+20.43
H/L Special I			VOL		0.80	1	97	04H	-23.06
Bobbin	47	45	ODI	64	0.55	P 1	94	03H	+0.02
Bobbin	47	51	NQI		1.20	P 1	137	17C	-0.27
C/L Special I			VOL		0.58	P 1	48	17C	-0.25
Bobbin	47	53	NQI		0.21	P 1	117	17C	+0.00
C/L Special I			VOL		0.43	P 1	76	17C	-0.29
Bobbin	47	54	WAR	25	3.78	P 2	0	17C	+0.00
Bobbin	47	55	NQI		0.35	P 1	123	17C	+0.05
C/L Special I			VOL		0.22	P 1	85	17C	+0.08
Bobbin	47	59	ODI	20	0.46	3	127	13C	+15.52
Bobbin	47	62	WAR	11	1.45	P 2	0	17C	+0.00
Bobbin	47	63	WAR	10	1.32	P 2	0	17C	+0.00
Bobbin	47	70	ADI		1.84	6	87	05H	+15.47
Bobbin			WAR	8	0.95	P 2	0	18C	+0.00
H/L Special I			VOL		0.57	1	128	05H	+15.17
Bobbin	47	77	NQI		55.24	P 1	191	TEH	+11.83
Bobbin	48	49	WAR	9	1.04	P 2	0	17C	+0.00
Bobbin	48	53	WAR	18	2.55	P 2	0	17C	+0.00
Bobbin	48	54	ODI	20	2.52	4	130	02H	+17.42
Bobbin			NQI		0.48	P 1	142	17C	-0.12
H/L Special I			VOL		2.20	1	114	03H	-6.52
C/L Special I			VOL		0.61	P 1	102	17C	-0.14
Bobbin	48	55	NQI		0.34	P 1	150	17C	+0.12
C/L Special I			VOL		0.53	P 1	81	17C	+0.19
Bobbin	48	56	ODI	38	0.51	P 1	119	17C	-0.12
C/L Special I			VOL		0.63	P 1	87	17C	+0.24
Bobbin	48	57	ODI	57	0.45	P 1	102	17C	+0.00
C/L Special I			VOL		0.86	P 1	103	17C	+0.05
Bobbin	48	58	ODI	23	0.41	P 1	129	18C	+0.03
Bobbin			WAR	16	2.14	P 2	0	17C	+0.00
Bobbin	48	60	WAR	8	1.00	P 2	0	17C	+0.00
Bobbin	48	61	WAR	13	1.69	P 2	0	17C	+0.00
Bobbin			WAR	14	1.84	P 2	0	20C	+0.00
Bobbin	48	62	WAR	6	0.78	P 2	0	17C	+0.00
Bobbin	48	64	ODI	8	0.52	3	130	06H	+40.24
H/L Special I			VOL		0.76	1	161	07H	-4.08
Bobbin	48	65	WAR	13	1.74	P 2	0	17C	+0.18
Bobbin	48	69	ODI	22	0.30	3	122	01H	+0.92
H/L Special I			VOL		0.18	1	62	01H	+0.98
Bobbin	48	71	ADI		1.88	4	139	10C	+21.88
C/L Special I			VOL		0.68	1	133	10C	+21.88
Bobbin	48	82	ADI		1.42	6	71	10C	+8.30
C/L Special I			VOL		0.59	1	97	10C	+8.64
Bobbin	49	49	WAR	12	1.49	P 2	0	17C	+0.00
Bobbin	49	51	WAR	18	2.45	P 2	0	17C	+0.00
Bobbin	49	52	WAR	12	1.52	P 2	0	17C	+0.00
Bobbin	49	55	WAR	13	1.64	P 2	0	17C	+0.00
Bobbin	49	56	WAR	9	1.11	P 2	0	17C	+0.00
Bobbin	49	57	NQI		0.86	P 1	163	13C	-0.15
Bobbin			WAR	7	0.86	P 2	0	15C	+0.00
C/L Special I			VOL		0.64	P 1	65	13C	-0.18
Bobbin	49	60	WAR	8	1.04	P 2	0	17C	+0.00
Bobbin	49	71	NQI		0.37	P 1	108	06H	+0.61
H/L Special I			VOL		0.38	1	102	06H	+0.61
Bobbin	49	79	ADI		1.74	6	92	11C	+21.42

Total Indications Found = 775

Total Tubes Found = 415

## ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
H/L Tubesheet	2	12	SAI		1.05	1	19	TSH	+0.01	TSH
H/L Tubesheet	2	21	SAI		0.77	1	10	TSH	+0.02	TSH
Bobbin	2	26	ODI	11	1.64	4	132	19C	+1.05	09C
C/L Special I			VOL		0.65	1	99	19C	+0.79	19C
Bobbin	2	39	NQI		4.41	P 1	111	TEH	+5.32	09C
Bobbin			NQI		36.09	P 1	71	TEH	+4.28	09C
Bobbin	2	51	NQI		3.25	P 1	92	TEH	+15.90	09C
Bobbin			NQI		10.71	P 1	164	TEH	+9.15	09C
Bobbin	2	53	ADI		3.34	6	71	14C	+2.36	09C
Bobbin	2	62	NQI		3.01	P 1	36	TEC	+2.72	09C
Bobbin	2	72	NQI		1.69	P 1	130	TEC	+17.40	09C
Bobbin	2	90	ADI		0.50	6	70	18C	+13.82	09C
Bobbin	2	92	ADI		1.62	6	71	17C	+3.92	09C
C/L Special I			VOL		0.78	1	128	17C	+3.66	17C
Bobbin	2	107	NQI		21.54	P 1	27	TEH	+4.20	09C
Bobbin	3	9	NQI		0.41	3	61	21C	+8.62	09C
C/L Special I			VOL		0.63	1	127	21C	+9.06	21C
Bobbin	3	14	NQI		7.37	P 1	46	TEH	+11.56	09C
Bobbin	3	42	NQI		24.38	P 1	18	TEH	+14.25	09C
Bobbin	3	44	ADI		2.19	6	71	22C	+11.18	09C
C/L Special I			VOL		0.50	1	120	22C	+11.12	22C
Bobbin	3	49	ADI		1.39	6	62	18C	+9.93	09C
Bobbin			ADI		1.44	6	62	12C	+24.41	09C
C/L Special I			VOL		0.31	1	101	18C	+9.42	18C
C/L Special I			VOL		0.37	1	52	12C	+23.60	12C
Bobbin	3	95	NQI		18.72	P 1	44	TEH	+5.31	09C
Bobbin	3	105	ADI		2.16	6	74	19C	+37.00	09C
C/L Special I			VOL		0.65	1	103	16C	-4.45	16C
C/L Special I			VOL		2.47	1	94	16C	-4.18	16C
Bobbin	4	42	NQI		7.35	P 1	150	TEH	+13.95	09C
Bobbin	4	53	NQI		72.47	P 1	51	TEH	+5.60	09C
Bobbin	4	88	NQI		34.21	P 1	34	TEH	+11.94	09C
Bobbin	4	91	NQI		4.42	P 1	163	TEH	+5.12	09C
Bobbin	5	6	NQI		10.83	P 1	130	TEH	+10.75	09C
Bobbin	5	8	ODI	8	1.06	4	128	20C	+6.86	09C
C/L Special I			VOL		0.72	1	113	19C	-1.47	19C
Bobbin	5	26	NQI		7.02	P 1	118	TEH	+11.10	09C
Bobbin	5	28	ODI	23	0.86	3	124	11C	+9.43	09C
C/L Special I			VOL		0.79	1	124	11C	+9.42	11C
Bobbin	5	32	ODI	12	1.14	3	134	22C	+4.84	09C
C/L Special I			VOL		0.91	1	111	22C	+5.22	22C
Bobbin	5	40	NQI		17.35	P 1	18	TEC	+17.14	09C
Bobbin	5	78	ODI	27	0.90	3	122	TSH	+5.59	09C
Bobbin	5	80	NQI		18.39	P 1	30	TEH	+14.02	09C
Bobbin	5	100	ODI	34	0.53	P 1	122	03H	-0.04	09C
H/L Special I			SAI		0.21	P 1	25	03H	+0.00	03H
Bobbin	5	105	NQI		1.03	P 1	59	03H	+0.05	09C
H/L Special I			SAI		1.04	P 1	47	03H	+0.09	03H
Bobbin	5	106	NQI		0.26	P 1	57	03H	+0.00	09C
H/L Special I			MAI		0.15	P 1	66	03H	+0.02	03H
Bobbin	6	2	ODI	16	0.52	3	129	02H	+11.33	F/L
H/L Special I			VOL		1.05	1	124	02H	+11.67	02H
Bobbin	6	8	NQI		0.30	3	70	10C	+41.00	F/L
Bobbin	6	26	NQI		0.76	3	106	21C	+3.02	F/L
C/L Special I			VOL		0.72	1	104	21C	+3.15	21C
H/L Tubesheet	6	53	SAI		0.88	1	19	TSH	-4.25	TSH
Bobbin	6	61	ADI		1.16	6	72	04H	+13.18	F/L
Bobbin			ODI	24	0.57	4	122	04H	+20.17	F/L
Bobbin	6	66	ODI	4	0.76	3	141	TSH	+6.91	F/L
H/L Special I			MAI		2.59	1	23	TEH	+1.90	TEH
Bobbin	6	69	NQI		12.71	P 1	123	TEH	+7.36	F/L
H/L Special I			MAI		4.49	1	9	TEH	+7.36	TEH
H/L Special I			SAI		0.96	1	21	TEH	+4.27	TEH
H/L Special I			SAI		1.24	1	6	TEH	+3.20	TEH
Bobbin	6	71	ADI		1.90	6	81	03H	+5.85	F/L

ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	6	84	NQI		0.44	P 1	64	02H	+0.13	F/L
Bobbin	6	86	ODI	8	1.23	3	138	05H	+31.81	F/L
H/L Special I			VOL		1.11	1	143	06H	-11.55	06H
Bobbin	6	111	NQI		0.73	P 1	30	04H	+0.02	F/L
Bobbin	7	7	NQI		1.33	P 1	83	02H	+0.02	F/L
H/L Special I			SAI		0.83	P 1	44	02H	+0.01	02H
Bobbin	7	18	ADI		2.29	6	71	05H	+35.52	F/L
Bobbin	7	43	NQI		27.82	P 1	14	TEH	+7.60	F/L
Bobbin	7	60	NQI		2.67	P 1	124	TEH	+13.48	F/L
Bobbin	7	63	ADI		1.77	6	62	03H	+14.51	F/L
H/L Special I			VOL		0.66	1	134	03H	+15.51	03H
Bobbin	7	67	ADI		1.52	6	69	03H	+8.31	F/L
Bobbin			ADI		1.55	6	65	03H	+13.51	F/L
H/L Special I			VOL		0.70	1	96	03H	+13.51	03H
Bobbin	7	77	ODI	5	1.00	4	134	06H	+16.06	F/L
Bobbin			ODI	20	0.69	4	124	06H	+14.68	F/L
H/L Special I			VOL		0.52	1	109	06H	+9.83	06H
H/L Special I			VOL		0.53	1	58	06H	+13.95	06H
H/L Special I			VOL		0.64	1	74	06H	+15.19	06H
H/L Special I			VOL		0.76	1	66	06H	+16.74	06H
Bobbin	7	85	NQI		0.36	P 1	76	02H	+0.00	F/L
H/L Special I			MAI		0.23	1	65	02H	-0.02	02H
Bobbin	7	113	NQI		0.71	P 1	53	04H	+0.19	F/L
Bobbin	8	22	NQI		0.16	P 1	67	02H	+0.04	F/L
Bobbin	8	38	ODI	4	1.27	3	140	06H	+38.97	F/L
H/L Special I			VOL		1.31	1	119	07H	-5.35	07H
Bobbin	8	63	NQI		0.69	3	123	06H	+22.84	F/L
Bobbin	8	64	ADI		1.87	6	74	05H	+16.01	F/L
Bobbin			ADI		2.55	6	71	03H	+21.00	F/L
H/L Special I			VOL		0.43	1	112	03H	+21.43	03H
Bobbin	8	81	ODI	12	0.46	P 4	0	AV1	+0.00	F/L
U-Bend			VOL		0.16	2	105	AV1	+0.00	09C
H/L Tubesheet	8	100	VOL		1.30	1	128	TSH	+0.23	TSH
Bobbin	8	106	NQI		1.03	P 1	24	02H	-0.16	F/L
H/L Special I			SAI		0.55	P 1	52	02H	-0.10	02H
Bobbin	8	110	NQI		0.42	3	111	10C	+14.94	F/L
Bobbin	9	43	NQI		0.20	P 1	117	20C	+0.20	TSC
C/L Special I			VOL		0.57	1	191	20C	+0.07	20C
Bobbin	9	46	ODI	15	0.52	P 1	133	14C	+0.57	F/L
C/L Special I			VOL		0.50	1	159	14C	+0.23	14C
Bobbin	9	62	ADI		2.83	6	78	22C	+14.92	F/L
C/L Special I			VOL		0.53	1	127	21C	-6.31	21C
Bobbin	9	73	ADI		2.19	6	58	02H	+12.71	F/L
H/L Special I			VOL		0.86	1	121	02H	+12.76	02H
Bobbin	9	84	ODI	14	1.26	4	128	04H	+1.79	F/L
Bobbin	9	91	ADI		1.50	6	74	03H	+19.49	F/L
H/L Special I			VOL		0.78	1	117	03H	+20.41	03H
Bobbin	9	98	ADI		1.37	6	68	12C	+32.49	F/L
C/L Special I			VOL		1.17	1	18	11C	-11.39	11C
Bobbin	10	20	ADI		2.88	6	75	04H	+23.95	F/L
H/L Special I			VOL		1.13	1	103	04H	+24.32	04H
Bobbin	10	43	NQI		0.51	P 1	102	14C	+0.59	F/L
H/L Tubesheet	10	52	SAI		1.88	1	19	TSH	-2.37	TSH
Bobbin	10	64	ADI		1.31	6	67	03H	+17.73	F/L
H/L Tubesheet	10	99	VOL		0.26	1	136	TSH	-0.28	TSH
Bobbin	10	100	ADI		1.81	6	68	10C	+36.66	F/L
C/L Special I			VOL		0.67	1	99	09C	-7.34	09C
Bobbin	10	101	NQI		0.45	3	58	TSH	+7.29	F/L
Bobbin	11	7	ODI	28	0.64	P 1	119	04H	-0.11	F/L
H/L Tubesheet			VOL		0.21	1	92	TSH	-2.43	TSH
H/L Special I			SAI		0.14	2	61	04H	-0.04	04H
Bobbin	11	22	NQI		0.53	3	60	11C	+28.54	F/L
C/L Special I			VOL		1.24	1	129	11C	+28.07	11C
Bobbin	11	28	ADI		2.65	6	50	20C	+5.40	F/L
C/L Special I			VOL		2.18	1	95	20C	+5.37	19C

ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	11	29	NQI		0.55	3	49	17C	+4.93	F/L
C/L Special I			VOL		0.45	1	107	17C	+4.90	17C
Bobbin	11	32	ODI	10	1.05	4	131	06H	+20.60	F/L
H/L Special I			VOL		0.65	1	104	06H	+20.70	06H
H/L Tubesheet	11	45	SAI		6.73	1	18	TSH	-4.53	TSH
Bobbin	11	67	NQI		9.67	P 1	18	TEH	+12.30	F/L
Bobbin	11	72	NQI		15.20	P 1	16	TEH	+16.25	F/L
Bobbin	11	76	ADI		1.11	6	68	16C	+2.62	F/L
Bobbin			ADI		2.50	6	76	18C	+3.02	F/L
C/L Special I			VOL		0.19	1	109	16C	+2.48	16C
C/L Special I			VOL		0.33	1	90	18C	+2.88	18C
Bobbin	11	77	NQI		0.52	3	130	05H	+12.12	F/L
H/L Special I			VOL		0.30	1	82	05H	+11.93	05H
Bobbin	11	94	ADI		2.10	6	46	13C	+6.13	F/L
C/L Special I			VOL		0.51	1	108	13C	+5.74	13C
Bobbin	12	22	ADI		1.01	6	69	06H	+17.96	F/L
Bobbin			NQI		0.28	3	91	06H	+11.41	F/L
Bobbin			ODI	13	0.50	3	133	06H	+9.93	F/L
Bobbin			ODI	31	0.36	3	117	06H	+8.19	F/L
H/L Special I			VOL		0.42	1	58	06H	+9.99	06H
H/L Special I			VOL		0.42	1	113	06H	+18.19	06H
H/L Special I			VOL		0.43	1	142	06H	+8.10	06H
H/L Special I			VOL		0.48	1	130	06H	+11.54	06H
Bobbin	12	27	NQI		8.89	P 1	34	TEH	+12.69	F/L
H/L Tubesheet	12	30	MAI		1.81	1	21	TSH	-4.19	TSH
Bobbin	12	48	NQI		0.27	3	94	03H	+36.46	F/L
Bobbin			ODI	31	0.22	3	117	03H	+37.81	F/L
Bobbin	12	68	NQI		40.07	P 1	10	TSH	+0.05	F/L
Bobbin			NQI		3.13	P 1	117	TEH	+17.51	F/L
H/L Tubesheet			MAI		2.62	1	30	TSH	-4.23	TSH
Bobbin	12	75	NQI		0.48	3	65	03H	+21.96	F/L
H/L Special I			VOL		0.45	1	107	03H	+22.13	03H
H/L Tubesheet	12	78	SAI		0.74	1	18	TSH	+0.05	TSH
H/L Tubesheet	12	81	SAI		0.40	1	36	TSH	-1.26	TSH
Bobbin	12	85	NQI		1.31	P 1	62	TEH	+10.72	F/L
Bobbin	12	88	ADI		1.60	6	72	06H	+36.86	F/L
H/L Special I			VOL		0.54	1	94	07H	-6.82	07H
Bobbin	12	105	ADI		1.32	6	75	01H	+17.55	F/L
Bobbin	12	109	NQI		0.45	3	73	05H	+30.87	F/L
Bobbin			NQI		1.99	P 1	113	TSC	-1.32	F/L
H/L Special I			VOL		0.67	1	123	06H	-13.91	06H
Bobbin	13	15	ADI		1.39	6	70	22C	+4.45	F/L
C/L Special I			VOL		0.62	1	118	22C	+4.03	22C
Bobbin	13	66	NQI		8.24	P 1	22	TEH	+13.70	F/L
Bobbin			NQI		14.00	P 1	25	TEH	+9.74	F/L
Bobbin			NQI		17.85	P 1	28	TEH	+15.73	F/L
Bobbin	13	76	NQI		8.62	P 1	25	TEH	+16.94	F/L
Bobbin			NQI		18.47	P 1	38	TEH	+13.92	F/L
Bobbin	13	87	NQI		0.76	3	44	12C	+30.03	F/L
C/L Special I			VOL		0.24	1	78	12C	+31.10	12C
C/L Special I			VOL		0.30	1	144	12C	+15.22	12C
C/L Special I			VOL		0.45	1	115	12C	+29.72	12C
Bobbin	13	88	ODI	5	0.79	3	143	07H	+3.84	F/L
H/L Special I			VOL		1.09	1	142	07H	+4.03	07H
Bobbin	13	97	NQI		0.70	3	128	11C	+34.40	F/L
C/L Special I			VOL		0.86	1	41	10C	-9.75	10C
H/L Tubesheet	14	54	SAI		0.81	1	21	TSH	-5.14	TSH
Bobbin	14	61	ODI	1	1.00	3	146	10C	+3.93	F/L
C/L Special I			VOL		0.93	1	124	10C	+3.93	10C
Bobbin	14	67	NQI		13.21	P 1	30	TEH	+5.98	F/L
Bobbin	14	71	NQI		9.03	P 1	27	TEH	+9.91	F/L
Bobbin			NQI		15.52	P 1	29	TEH	+15.73	F/L
Bobbin			NQI		19.00	P 1	35	TEH	+14.79	F/L
H/L Tubesheet	14	72	MAI		2.27	1	19	TSH	-3.53	TSH
H/L Tubesheet	14	78	MAI		4.87	1	18	TSH	-4.58	TSH

ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	14	83	ADI		1.90	6	66	03H	+8.10 F/L
H/L Special I			VOL		0.46	1	79	03H	+4.93 03H
H/L Special I			VOL		0.62	1	102	03H	+8.32 03H
Bobbin	14	94	ODI	3	0.67	3	145	04H	+26.77 F/L
Bobbin			ODI	21	1.10	3	130	04H	+26.01 F/L
H/L Special I			VOL		1.58	1	126	04H	+26.58 04H
Bobbin	15	30	NQI		9.69	P 1	100	TEH	+11.09 F/L
Bobbin	15	44	ODI	6	1.09	3	137	21C	+2.10 F/L
C/L Special I			VOL		1.27	1	93	21C	+1.89 21C
Bobbin	15	57	ODI	17	0.35	3	128	05H	+28.39 F/L
H/L Special I			VOL		0.95	1	125	05H	+27.89 05H
Bobbin	15	83	ADI		4.31	6	79	01H	+16.00 F/L
Bobbin	15	95	NQI		0.54	3	62	03H	+36.85 F/L
H/L Special I			VOL		2.15	1	153	04H	-6.77 04H
Bobbin	15	109	NQI		4.13	P 3	77	TSH	-0.16 F/L
Bobbin	16	11	ODI	28	0.62	3	119	01H	+5.18 F/L
H/L Special I			VOL		1.44	1	131	01H	+5.32 01H
Bobbin	16	16	NQI		6.06	P 1	103	TEH	+14.57 F/L
Bobbin	16	18	NQI		7.55	P 1	135	TEH	+11.33 F/L
Bobbin	16	42	ADI		0.85	6	76	12C	+15.15 F/L
C/L Special I			VOL		0.36	1	120	12C	+15.14 12C
Bobbin	16	52	ODI	12	0.50	3	132	10C	+25.99 F/L
C/L Special I			VOL		0.90	1	108	10C	+25.61 10C
Bobbin	16	66	NQI		2.82	P 1	39	TEH	+9.86 F/L
Bobbin	16	67	NQI		24.37	P 1	23	TEH	+2.36 F/L
Bobbin	16	78	ODI	6	0.50	3	139	03H	+41.50 F/L
H/L Special I			VOL		0.37	1	145	04H	-2.38 04H
Bobbin	16	79	NQI		0.49	3	86	05H	+5.93 F/L
H/L Special I			VOL		0.99	1	42	05H	+5.96 05H
Bobbin	16	100	ODI	20	0.64	3	128	13C	+2.24 F/L
C/L Special I			VOL		0.54	1	120	13C	+2.29 13C
Bobbin	16	110	NQI		0.45	P 1	53	04H	+0.00 F/L
H/L Tubesheet	17	30	SAI		2.43	1	17	TSH	-4.31 TSH
Bobbin	17	33	NQI		0.36	3	92	06H	+40.63 F/L
Bobbin			NQI		10.30	P 1	171	TEH	+9.19 F/L
H/L Special I			VOL		0.94	1	107	07H	-3.98 07H
Bobbin	17	71	ODI	28	0.37	3	121	02H	+8.07 F/L
H/L Special I			VOL		0.65	1	127	02H	+8.44 02H
Bobbin	17	80	NQI		0.22	P 1	86	03H	+0.13 F/L
Bobbin	17	98	ODI	7	0.66	3	138	10C	+16.01 F/L
Bobbin	17	102	NQI		0.36	P 1	50	02H	+0.00 F/L
H/L Special I			SAI		0.24	P 1	50	02H	+0.01 02H
Bobbin	18	29	NQI		6.45	P 1	156	TEH	+14.16 F/L
Bobbin	18	60	NQI		0.38	P 1	72	04H	-0.75 F/L
H/L Tubesheet			SAI		2.35	1	25	TSH	-4.38 TSH
H/L Special I			VOL		1.45	1	11	04H	-0.74 04H
H/L Tubesheet	18	61	SAI		2.89	1	28	TSH	-4.44 TSH
H/L Tubesheet	18	65	SAI		2.21	1	29	TSH	-4.42 TSH
Bobbin	18	76	NQI		0.50	P 1	66	02H	+0.13 F/L
H/L Special I			SAI		0.29	P 1	57	02H	+0.08 02H
Bobbin	18	90	ODI	20	0.45	3	128	05H	+38.07 F/L
H/L Special I			VOL		1.04	1	149	06H	-6.59 06H
Bobbin	18	100	NQI		4.65	P 1	48	TEH	+11.84 F/L
Bobbin	18	111	ODI	5	0.72	3	140	11C	+17.29 F/L
C/L Special I			VOL		0.91	1	55	11C	+17.47 11C
Bobbin	19	48	NQI		0.26	3	78	12C	+6.97 F/L
C/L Special I			VOL		0.62	1	88	12C	+6.78 12C
Bobbin	19	52	NQI		0.48	3	115	07H	+15.02 F/L
H/L Special I			VOL		0.80	1	132	07H	+14.70 07H
Bobbin	19	77	WAR	16	0.82	P 4	0	AV4	+0.00 F/L
Bobbin	19	85	ODI	3	0.80	3	141	05H	+29.07 F/L
H/L Special I			VOL		0.75	1	112	06H	-15.26 06H
Bobbin	19	95	NQI		0.68	3	105	10C	+30.03 F/L
C/L Special I			VOL		0.74	1	109	09C	-13.97 09C
Bobbin	19	97	ODI	11	0.55	4	131	04H	+16.42 F/L

## ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Special I			VOL		1.29	1	149	04H	+16.59
Bobbin	19	100	ODI	11	0.47	3	135	04H	+32.74
H/L Special I			VOL		0.66	1	163	05H	-11.70
Bobbin	20	20	NQI		19.53	P 1	70	TEH	+14.09
H/L Tubesheet	20	44	SAI		4.81	1	20	TSH	-4.39
Bobbin	20	58	NQI		19.72	P 1	25	TEH	+6.68
H/L Tubesheet	20	60	SAI		1.38	1	18	TSH	-1.54
Bobbin	20	61	NQI		10.95	P 1	164	TEH	+13.01
Bobbin			NQI		11.37	P 1	160	TEH	+14.99
Bobbin			NQI		11.84	P 1	165	TEH	+13.96
Bobbin			NQI		12.72	P 1	171	TEH	+15.99
H/L Special I			MAI		2.58	1	27	TEH	+16.99
H/L Special I			MAI		2.63	1	28	TEH	+15.15
H/L Special I			MAI		2.68	1	33	TEH	+14.33
H/L Special I			MAI		3.02	1	35	TEH	+16.11
H/L Special I			SAI		0.25	2	30	TEH	+8.59
H/L Special I			SAI		2.24	1	43	TEH	+11.23
Bobbin	20	68	WAR	10	0.46	P 4	0	AV4	+0.00
Bobbin	20	73	ODI	15	0.33	P 1	129	02H	+0.03
Bobbin	20	82	ADI		1.02	6	80	15C	+3.02
C/L Special I			VOL		1.41	1	30	15C	+3.01
Bobbin	20	83	ODI	27	0.24	P 1	121	04H	+0.13
Bobbin	20	99	ODI	7	0.98	3	139	16C	+3.00
C/L Special I			VOL		2.38	1	66	16C	+2.97
Bobbin	20	109	WAR	16	0.87	P 4	0	AV4	+0.00
Bobbin	21	5	NQI		0.75	P 1	84	02H	-0.02
H/L Special I			MAI		0.61	1	61	02H	-0.02
Bobbin	21	56	NQI		0.53	3	110	11C	+5.78
C/L Special I			VOL		0.96	1	89	11C	+5.60
Bobbin	21	57	ODI	3	0.74	3	142	05H	+23.50
Bobbin			ODI	11	0.51	3	136	05H	+33.63
H/L Special I			VOL		0.71	1	98	06H	-20.08
H/L Special I			VOL		0.78	1	125	06H	-10.18
Bobbin	21	69	WAR	23	1.46	P 4	0	AV2	+0.00
Bobbin			WAR	31	2.41	P 4	0	AV3	+0.00
Bobbin	21	72	WAR	17	0.90	P 4	0	AV3	+0.00
Bobbin	21	77	ODI	26	1.57	3	124	06H	+26.75
Bobbin			ODI	31	0.58	3	119	21C	+3.85
Bobbin			WAR	17	0.95	P 4	0	AV3	+0.00
Bobbin	21	81	ODI	36	0.69	3	115	18C	+3.73
C/L Special I			VOL		1.13	1	95	18C	+3.68
Bobbin	21	95	ODI	10	0.50	3	137	11C	+12.27
C/L Special I			VOL		0.96	1	92	11C	+12.27
Bobbin	22	48	NQI		0.35	3	104	02H	+17.17
Bobbin	22	59	ODI	38	0.46	3	113	11C	+31.41
C/L Special I			VOL		0.36	1	91	10C	-12.58
Bobbin	22	106	NQI		6.44	P 1	25	TEC	+19.23
Bobbin	22	107	NQI		7.43	P 1	22	TEC	+19.16
Bobbin			NQI		9.69	P 1	27	TEC	+8.41
Bobbin			NQI		10.52	P 1	22	TEC	+15.61
Bobbin	23	7	NQI		0.32	P 1	50	02H	-0.07
H/L Special I			SAI		0.26	1	37	02H	-0.01
Bobbin	23	69	NQI		2.30	P 1	129	TEC	+18.18
Bobbin	23	92	NQI		0.42	3	91	06H	+21.27
H/L Special I			VOL		0.73	1	122	06H	+16.88
H/L Special I			VOL		0.95	1	129	06H	+22.21
Bobbin	23	98	ADI		1.27	6	67	01H	+15.23
H/L Special I			VOL		0.46	1	102	01H	+16.36
Bobbin	23	101	NQI		0.34	3	75	01H	+13.60
H/L Special I			VOL		0.91	1	134	01H	+13.92
Bobbin	23	102	ODI	21	0.47	3	128	06H	+34.08
H/L Special I			VOL		1.49	1	130	07H	-10.31
Bobbin	24	20	NQI		0.22	P 1	81	02H	-0.02
Bobbin	24	27	NQI		0.28	P 1	103	03H	-0.16
Bobbin	24	36	ODI	3	1.12	3	141	03H	+16.56

## ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Special I			VOL		1.01	1	110	03H	+16.81
Bobbin	24	42	ODI	34	0.43	3	116	18C	+14.35
C/L Special I			VOL		1.28	1	110	18C	+13.92
Bobbin	24	58	ODI	11	0.27	P 1	137	04H	+0.03
Bobbin	24	66	NQI		0.85	3	121	20C	-1.46
Bobbin	24	88	ODI	16	0.91	3	132	05H	+15.22
H/L Special I			VOL		1.50	1	130	05H	+15.63
Bobbin	24	107	WAR	11	0.51	P 4	0	AV4	+0.00
Bobbin	25	12	WAR	7	0.35	P 4	0	AV1	+0.00
Bobbin	25	22	NQI		3.85	P 1	132	TEH	+12.83
Bobbin	25	58	NQI		0.22	P 1	98	04H	+0.00
Bobbin			WAR	10	0.50	P 4	0	AV3	+0.00
Bobbin	25	60	WAR	12	0.57	P 4	0	AV1	+0.00
Bobbin	25	74	ODI	9	1.82	3	137	05H	+16.95
H/L Special I			VOL		1.71	1	154	05H	+16.74
Bobbin	25	94	NQI		0.55	3	83	07H	+20.29
Bobbin			NQI		0.66	3	76	07H	+24.60
Bobbin			ODI	6	1.17	3	139	04H	+37.54
Bobbin			ODI	22	0.81	3	127	05H	+24.57
H/L Special I			VOL		0.86	1	102	07H	+21.19
H/L Special I			VOL		0.93	1	115	05H	-6.82
H/L Special I			VOL		1.01	1	114	07H	+24.61
H/L Special I			VOL		1.05	1	127	07H	+20.32
H/L Special I			VOL		1.31	1	110	05H	+25.17
Bobbin	26	27	NQI		20.45	P 1	49	TEH	+15.24
Bobbin	26	35	ADI		1.80	6	82	07H	+25.30
H/L Special I			VOL		1.33	1	126	07H	+26.01
Bobbin	26	38	ADI		1.82	6	61	10C	+23.27
Bobbin			ADI		2.16	6	72	11C	+35.14
C/L Special I			VOL		2.16	1	76	10C	+22.95
C/L Special I			VOL		2.72	1	64	10C	-8.17
Bobbin	26	41	WAR	14	0.67	P 4	0	AV2	+0.00
H/L Tubesheet	26	42	SAI		0.69	1	32	TSH	-5.76
Bobbin	26	45	WAR	9	0.41	P 4	0	AV2	+0.00
Bobbin	26	49	WAR	14	0.67	P 4	0	AV2	+0.00
Bobbin	26	98	NQI		0.49	3	46	TSH	+2.72
Bobbin	26	101	NQI		0.58	3	87	05H	+5.57
H/L Special I			VOL		0.73	1	49	05H	+5.59
Bobbin	26	105	NQI		4.72	P 1	41	TEC	+7.27
Bobbin	27	32	WAR	20	0.85	P 4	0	AV3	+0.00
Bobbin	27	34	WAR	15	0.71	P 4	0	AV3	+0.00
Bobbin	28	20	NQI		0.17	P 1	111	03H	-0.08
Bobbin	28	41	WAR	14	0.68	P 4	0	AV3	+0.00
Bobbin	28	56	ODI	2	1.50	4	141	19C	+4.89
Bobbin	29	12	WAR	14	0.73	P 4	0	AV1	+0.00
Bobbin	29	31	NQI		1.37	P 1	44	TEC	+1.23
Bobbin	29	38	NQI		14.00	3	36	AV4	+12.51
Bobbin	29	39	NQI		14.60	3	30	09C	+3.85
Bobbin	29	57	NQI		1.12	P 1	73	TEH	+15.41
Bobbin			WAR	10	0.49	P 4	0	AV1	+0.00
Bobbin	29	69	NQI		0.50	3	68	TSC	+2.63
Bobbin	29	87	WAR	16	0.46	P 4	0	AV1	+0.00
Bobbin	30	95	ODI	21	0.71	3	128	05H	+9.37
H/L Special I			VOL		0.68	1	111	05H	+9.20
Bobbin	30	103	WAR	12	0.31	P 4	0	AV2	+0.00
Bobbin			WAR	13	0.34	P 4	0	AV1	+0.00
Bobbin	31	27	NQI		0.13	P 1	78	12C	-0.09
H/L Tubesheet	31	29	SAI		0.27	1	142	TSH	+0.07
H/L Tubesheet	31	32	SAI		0.31	1	140	TSH	-0.21
Bobbin	31	65	WAR	19	0.60	P 4	0	AV1	+0.00
Bobbin	31	76	NQI		0.66	P 1	45	02H	+0.00
Bobbin	31	86	WAR	21	0.69	P 4	0	AV3	+0.00
Bobbin	31	98	WAR	16	0.47	P 4	0	AV2	+0.00
Bobbin	32	63	ODI	36	0.89	4	108	10C	+3.19
C/L Special I			VOL		0.54	1	64	10C	+2.76

Bobbin, C/L Special Interest, C/L Tubesheet, H/L Special Interest, H/L Tubesheet, U-Bend

ATTACHMENT #7 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	32	92	ADI		2.47	6	67	07H	+31.01
Bobbin			NQI		0.73	3	51	07H	+39.69
Bobbin			ODI	5	0.81	3	139	18C	+9.07
Bobbin			ODI	35	0.33	3	115	06H	+33.56
C/L Special I			VOL		0.42	1	110	18C	+9.28
H/L Special I			VOL		0.22	1	115	07H	-8.54
H/L Special I			VOL		0.27	1	131	07H	-7.16
H/L Special I			VOL		0.61	1	127	08H	-4.16
H/L Special I			VOL		1.16	1	148	08H	-12.49
Bobbin	32	93	NQI		0.35	3	74	02H	-1.27
Bobbin			NQI		0.36	3	56	11C	+36.20
C/L Special I			VOL		0.43	1	93	10C	-7.99
Bobbin	33	12	WAR	10	0.50	P 4	0	AV2	+0.00
Bobbin			WAR	10	0.50	P 4	0	AV4	+0.00
Bobbin			WAR	12	0.59	P 4	0	AV1	+0.00
Bobbin			WAR	29	2.15	P 4	0	AV3	+0.00
Bobbin	33	13	WAR	8	0.40	P 4	0	AV1	+0.00
Bobbin	33	51	WAR	17	0.90	P 4	0	AV1	+0.00
Bobbin	33	84	WAR	20	1.18	P 4	0	AV2	+0.00
Bobbin	34	74	WAR	11	0.53	P 4	0	AV3	+0.00
Bobbin	34	78	NQI		13.27	P 1	17	TEH	+8.20
Bobbin	34	85	WAR	12	0.58	P 4	0	AV1	+0.00
Bobbin	34	86	ODI	20	0.12	P 1	126	07H	+0.05
Bobbin	34	96	NQI		0.46	3	111	03H	+24.62
H/L Special I			VOL		0.64	1	113	03H	+23.94
Bobbin	35	33	WAR	17	0.94	P 4	0	AV3	+0.00
Bobbin	36	19	WAR	19	0.55	P 4	0	AV3	+0.00
Bobbin	36	35	ODI	4	1.12	4	149	13C	+15.74
C/L Special I			VOL		1.75	1	31	13C	+16.23
Bobbin	36	49	WAR	18	0.51	P 4	0	AV4	+0.00
Bobbin			WAR	26	1.69	P 4	0	AV1	+0.00
Bobbin			WAR	28	1.99	P 4	0	AV2	+0.00
Bobbin	36	54	ODI	14	0.86	3	134	06H	+4.43
H/L Special I			VOL		0.57	1	124	06H	+4.44
Bobbin	36	72	ODI	1	0.86	3	144	04H	+10.79
Bobbin			WAR	21	1.28	P 4	0	AV2	+0.00
Bobbin			WAR	22	1.31	P 4	0	AV1	+0.00
H/L Special I			VOL		0.93	1	127	04H	+10.79
Bobbin	36	88	WAR	18	1.00	P 4	0	AV2	+0.00
Bobbin	37	29	ODI	8	0.85	3	138	07H	+23.68
H/L Special I			VOL		0.72	1	100	08H	-8.54
H/L Special I			VOL		0.86	1	118	08H	-21.50
Bobbin	37	44	NQI		10.40	P 1	24	TEH	+13.27
Bobbin			NQI		15.81	P 1	22	TEH	+14.23
Bobbin	37	69	NQI		0.28	3	115	15C	+1.91
C/L Special I			VOL		0.26	1	92	15C	+2.42
Bobbin	37	98	NQI		0.42	P 1	56	03H	-1.23
H/L Special I			SAI		0.43	1	52	03H	-0.11
Bobbin	37	99	ODI	9	1.81	3	138	10C	+9.44
C/L Special I			VOL		1.53	1	123	10C	+9.37
Bobbin	38	17	NQI		0.98	P 1	29	03H	-0.03
Bobbin	38	18	WAR	7	0.35	P 4	0	AV1	+0.00
Bobbin			WAR	26	0.92	P 4	0	AV3	+0.00
Bobbin	38	22	WAR	22	0.70	P 4	0	AV1	+0.00
Bobbin	38	34	ODI	11	0.37	3	133	06H	+14.45
Bobbin	38	44	ADI		2.12	6	76	12C	+23.51
Bobbin			ADI		2.37	6	44	03H	+4.27
C/L Special I			VOL		1.21	1	125	12C	+24.48
H/L Special I			VOL		0.93	1	127	03H	+4.15
Bobbin	38	46	WAR	21	1.27	P 4	0	AV1	+0.00
U-Bend	38	47	VOL		1.14	1	156	AV3	+0.00
Bobbin			WAR	19	0.53	P 4	0	AV2	+0.00
Bobbin			WAR	36	1.89	P 4	0	AV3	+0.00
Bobbin	38	70	WAR	17	0.92	P 4	0	AV1	+0.00
Bobbin	38	79	WAR	15	0.81	P 4	0	AV1	+0.00



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## INDS OF IMPERFECTIONS - SGC

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin			WAR	20	1.13	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	23	1.39	P 4	0	AV3	+0.00	F/L
Bobbin	39	27	WAR	23	0.74	P 4	0	AV1	+0.00	F/L
U-Bend	39	29	VOL		0.39	2	102	AV2	+0.00	AV2
Bobbin			WAR	23	0.75	P 4	0	AV4	+0.00	F/L
Bobbin			WAR	32	1.44	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	37	2.15	P 4	0	AV2	+0.00	F/L
Bobbin	39	31	WAR	27	1.01	P 4	0	AV2	+0.00	F/L
Bobbin	39	87	WAR	12	0.57	P 4	0	AV1	+0.00	F/L
Bobbin	39	88	WAR	16	0.83	P 4	0	AV3	+0.00	F/L
Bobbin	40	19	WAR	26	0.89	P 4	0	AV1	+0.00	F/L
Bobbin	40	51	WAR	8	0.23	P 4	0	AV1	+0.00	F/L
C/L Tubesheet	40	55	VOL		0.42	1	40	TSC	-1.17	TSC
Bobbin	40	62	WAR	31	2.47	P 4	0	AV1	-0.08	F/L
Bobbin	40	65	ODI	13	0.86	3	133	06H	+31.05	F/L
H/L Special I			VOL		1.52	1	132	07H	-12.90	07H
Bobbin	41	44	ODI	35	0.73	3	114	04H	+3.64	F/L
H/L Special I			VOL		0.88	1	108	04H	+3.96	04H
Bobbin	41	46	WAR	19	1.07	P 4	0	AV1	+0.00	F/L
Bobbin	41	53	NQI		0.58	P 1	72	18C	+0.98	F/L
Bobbin	41	67	NQI		0.28	3	102	20C	+2.45	F/L
H/L Tubesheet	41	86	VOL		0.62	1	88	TSH	+0.58	TSH
Bobbin	42	34	ODI	1	0.67	P 1	140	18C	+0.79	F/L
Bobbin	42	36	NQI		0.30	P 1	118	18C	+0.27	F/L
Bobbin	42	44	WAR	16	0.87	P 4	0	AV1	+0.00	F/L
Bobbin	42	45	WAR	20	1.12	P 4	0	AV1	+0.00	F/L
Bobbin	42	56	NQI		0.35	P 1	60	18C	+0.95	F/L
Bobbin	42	60	ODI	4	0.74	3	144	03H	+24.24	F/L
H/L Special I			VOL		0.76	1	129	03H	+23.41	03H
Bobbin	42	81	WAR	26	1.74	P 4	0	AV3	+0.00	F/L
Bobbin	42	83	WAR	23	1.49	P 4	0	AV2	+0.00	F/L
Bobbin	42	86	NQI		0.59	3	107	12C	+1.51	F/L
Bobbin			ODI	10	0.94	3	139	12C	+25.77	F/L
C/L Special I			VOL		1.71	1	123	12C	+7.68	12C
C/L Special I			VOL		2.74	1	37	12C	+19.97	12C
C/L Special I			VOL		2.85	1	98	12C	+11.00	12C
C/L Special I			VOL		3.09	1	115	12C	+25.76	12C
C/L Special I			VOL		3.46	1	140	12C	+1.50	12C
Bobbin	42	87	WAR	23	1.47	P 4	0	AV3	+0.00	F/L
Bobbin	42	91	WAR	29	2.11	P 4	0	AV2	+0.00	F/L
Bobbin	43	35	ADI		0.92	6	53	07H	+4.45	F/L
Bobbin			ODI	14	0.68	4	124	07H	+2.98	F/L
H/L Special I			VOL		0.56	1	116	07H	+2.62	07H
H/L Special I			VOL		1.17	1	147	07H	+4.32	07H
Bobbin	43	41	NQI		0.84	P 1	96	03H	-0.20	F/L
H/L Special I			SAI		0.31	P 1	46	03H	-0.06	03H
Bobbin	43	43	NQI		0.40	P 1	106	18C	+0.71	F/L
Bobbin	43	45	NQI		0.35	P 1	61	18C	+0.74	F/L
Bobbin	43	47	NQI		0.23	P 1	63	18C	+0.65	F/L
Bobbin	43	51	NQI		0.17	P 1	88	10C	+0.10	F/L
Bobbin			NQI		0.29	P 1	91	18C	+0.86	F/L
Bobbin	43	62	WAR	21	1.19	P 4	0	AV1	+0.00	F/L
Bobbin	43	64	WAR	29	2.21	P 4	0	AV1	+0.00	F/L
Bobbin	43	74	ODI	30	0.78	3	118	03H	+35.92	F/L
H/L Special I			VOL		1.72	1	152	04H	-8.66	C4H
Bobbin	43	82	WAR	17	0.92	P 4	0	AV1	+0.00	F/L
Bobbin	43	83	WAR	17	0.91	P 4	0	AV3	+0.00	F/L
Bobbin	43	87	WAR	14	0.68	P 4	0	AV1	+0.00	F/L
Bobbin	43	92	WAR	18	0.96	P 4	0	AV4	+0.00	F/L
Bobbin	44	38	ADI		1.89	6	78	13C	+5.36	F/L
Bobbin	44	44	NQI		0.07	P 1	90	02H	-0.05	F/L
Bobbin	44	46	ADI		1.64	6	71	12C	+33.36	F/L
C/L Special I			VOL		3.06	1	112	11C	-10.93	11C
C/L Tubesheet	44	56	VOL		0.54	1	119	TSC	-1.01	TSC
Bobbin	45	47	WAR	19	1.09	P 4	0	AV1	+0.00	F/L

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TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	46	28	NQI		0.31	3	68	18C	+20.34
Bobbin	46	33	NQI		0.40	3	93	17C	-0.05
Bobbin	46	34	ADI		2.01	6	80	07H	+35.80
H/L Special I			VOL		0.49	1	129	08H	-8.93
Bobbin	46	40	NQI		0.32	3	41	06H	+38.76
Bobbin	46	44	ODI	10	1.22	4	133	10C	+14.76
C/L Special I			VOL		2.66	1	74	10C	+14.83
Bobbin	46	77	WAR	15	0.81	P 4	0	AV1	+0.00
Bobbin	47	53	ADI		1.12	6	76	15C	+6.24
C/L Special I			VOL		0.12	1	113	15C	+6.59
C/L Tubesheet	47	55	VOL		0.72	1	135	TSC	-2.54
Bobbin	47	72	WAR	5	0.65	P 2	0	18C	+0.00
Bobbin	47	73	WAR	5	0.62	P 2	0	18C	+0.00
Bobbin	48	29	NQI		0.45	3	75	12C	+18.15
C/L Special I			VOL		0.65	1	105	12C	+18.15
Bobbin	48	47	NQI		0.13	P 1	102	16C	+0.00
Bobbin	48	48	NQI		0.11	P 1	104	06H	-0.03
Bobbin	48	50	WAR	6	1.57	P 2	0	17C	+0.00
Bobbin	48	70	WAR	2	0.21	P 2	0	16C	+0.00
Bobbin	48	71	WAR	3	0.38	P 2	0	16C	+0.00
Bobbin	49	44	NQI		0.20	P 1	60	12C	+0.07
Bobbin	49	46	NQI		0.34	3	112	TSH	+5.75
Bobbin	49	51	WAR	14	4.33	P 2	91	17C	+0.00
Bobbin	49	53	WAR	9	2.46	P 2	100	17C	+0.00
C/L Tubesheet			VOL		0.75	1	121	TSC	-2.49
Bobbin	49	54	ODI	9	0.51	3	135	13C	+14.41
C/L Special I			VOL		4.05	1	131	12C	-8.48
Bobbin	49	55	WAR	12	3.42	P 2	0	17C	+0.00
H/L Tubesheet	49	81	VOL		0.27	1	112	TSH	+2.32
H/L Tubesheet	49	84	NQI		0.33	1	40	TSH	-0.46

Total Indications Found = 550

Total Tubes Found = 325

## ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	1	13	NQI		0.25	3	97	22C	+5.31
C/L Special I			VOL		0.36	1	109	22C	+5.13
Bobbin	1	19	NQI		3.69	P 1	42	TEH	+1.58
Bobbin	2	6	ADI		1.54	6	69	12C	+35.32
Bobbin			ODI	22	0.32	3	126	TSC	+3.72
C/L Special I			VOL		0.52	1	37	TSC	+3.59
C/L Special I			VOL		0.66	1	137	11C	-8.99
Bobbin	2	59	NQI		9.55	P 1	31	TEH	+5.10
Bobbin	2	61	NQI		10.97	P 1	71	TEH	+14.85
H/L Tubesheet			VOL		0.37	1	156	TSH	-0.49
Bobbin	2	85	NQI		5.22	P 1	23	TEH	+14.56
Bobbin	2	89	ADI		0.87	6	71	11C	+3.21
C/L Special I			VOL		0.25	1	71	11C	+2.99
Bobbin	2	103	ODI	29	0.67	3	123	19C	+18.92
C/L Special I			VOL		0.21	1	120	19C	+18.92
H/L Tubesheet	2	114	VOL		0.39	1	116	TSH	-0.55
Bobbin	3	12	ADI		2.33	6	80	16C	+18.03
C/L Special I			VOL		0.66	1	122	16C	+17.75
C/L Special I			VOL		0.76	1	141	16C	+3.18
Bobbin	3	22	ODI	1	1.45	3	151	06H	+10.32
Bobbin			ODI	3	0.54	3	143	12C	+35.64
C/L Special I			VOL		0.27	1	42	11C	-8.61
H/L Special I			VOL		1.17	1	119	06H	+10.32
Bobbin	3	31	ODI	29	0.34	3	121	12C	+39.07
C/L Special I			VOL		1.31	1	137	11C	-5.00
Bobbin	3	62	NQI		0.30	P 1	83	03H	+0.09
Bobbin	3	64	ODI	2	0.82	3	146	11C	+2.73
Bobbin			ODI	12	0.74	3	138	11C	+3.40
Bobbin			ODI	17	0.72	3	128	01H	+5.17
C/L Special I			VOL		0.18	3	116	11C	+2.68
C/L Special I			VOL		0.49	1	104	11C	+4.91
C/L Special I			VOL		0.83	1	134	11C	+3.44
H/L Special I			VOL		1.23	1	121	01H	+5.36
Bobbin	3	65	NQI		0.56	P 1	96	03H	+0.01
H/L Special I			SAI		0.92	1	28	03H	-0.06
Bobbin	3	70	NQI		0.58	3	103	TSH	+5.96
Bobbin	3	83	ADI		1.17	6	81	10C	+11.05
C/L Special I			VOL		0.25	1	102	10C	+10.80
H/L Tubesheet	3	85	SAI		0.96	1	24	TSH	-0.15
H/L Tubesheet	3	86	MAI		0.74	1	13	TSH	-0.08
Bobbin	3	87	ADI		1.38	6	92	10C	+19.71
Bobbin			ADI		1.68	6	77	10C	+4.51
Bobbin			ADI		2.09	6	77	16C	+12.04
Bobbin			ODI	2	1.28	3	146	14C	+4.61
C/L Special I			VOL		0.37	1	100	10C	+4.32
C/L Special I			VOL		0.49	1	139	10C	+19.64
C/L Special I			VOL		0.60	1	60	16C	+12.28
C/L Special I			VOL		0.60	1	117	14C	+4.81
Bobbin	3	88	NQI		0.51	P 1	74	03H	-0.05
H/L Special I			SAI		0.40	1	39	03H	-0.10
Bobbin	3	89	ODI	3	0.66	3	145	10C	+25.69
C/L Special I			VOL		0.90	1	131	10C	+25.71
H/L Tubesheet	3	105	SAI		0.37	1	19	TSH	-0.03
Bobbin	4	4	ADI		1.47	6	92	10C	+33.74
C/L Special I			VOL		0.48	1	124	09C	-10.85
Bobbin	4	7	NQI		0.70	3	109	12C	+25.41
C/L Special I			VOL		1.04	1	139	11C	-18.43
H/L Special I	4	15	SAI		0.18	1	35	05H	+0.05
Bobbin	4	35	NQI		10.55	P 1	94	TEH	+17.13
Bobbin	4	40	NQI		8.12	P 1	43	TEH	+1.44
Bobbin	4	57	NQI		20.90	P 1	180	TEH	+7.35
Bobbin	4	61	NQI		9.56	P 1	146	TEH	+14.94
Bobbin	4	86	NQI		0.68	3	113	11C	+13.15
C/L Special I			VOL		0.69	1	119	11C	+13.44
Bobbin	4	105	NQI		0.76	P 1	85	03H	+0.03

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Special I			SAI		1.19	1	50	03H	-0.11
H/L Tubesheet	4	110	SAI		0.47	1	26	TSH	-1.95
Bobbin	5	45	ADI		1.23	6	84	15C	+4.64
C/L Special I			VOL		0.63	1	70	15C	+4.37
Bobbin	5	58	NQI		68.73	P 1	45	TEC	+3.63
Bobbin			NQI		137.90	P 1	30	TEC	+5.18
Bobbin	5	59	NQI		7.25	P 1	49	TEC	+4.51
Bobbin			NQI		69.17	P 1	44	TEC	+3.87
Bobbin			NQI		94.20	P 1	26	TEC	+5.40
Bobbin	5	62	ADI		1.95	6	75	13C	+16.94
C/L Special I			VOL		0.66	1	104	12C	-5.25
H/L Tubesheet	5	68	SAI		0.24	1	50	TSH	-0.07
Bobbin	5	75	ODI	8	1.92	3	141	20C	+5.26
C/L Special I			VOL		1.16	1	108	20C	+5.46
H/L Tubesheet	5	87	SAI		0.41	1	8	TSH	-0.08
Bobbin	5	88	ODI	87	3.15	P 1	55	03H	+0.07
H/L Special I			SAI		3.70	1	31	03H	+0.00
Bobbin	5	98	ODI	13	0.53	3	132	04H	+36.03
H/L Tubesheet			VOL		0.23	1	130	TSH	-0.29
H/L Special I			VOL		0.97	1	151	05H	-8.09
H/L Tubesheet	5	105	MAI		0.38	1	22	TSH	-0.02
H/L Tubesheet	5	106	SAI		0.26	1	21	TSH	-0.06
H/L Tubesheet	5	108	MAI		0.20	1	33	TSH	-0.06
Bobbin	6	3	ADI		2.42	6	85	22C	+12.45
Bobbin			ODI	34	0.48	3	124	22C	+12.28
Bobbin	6	10	ODI	7	1.06	3	154	11C	+14.69
Bobbin			ODI	19	0.41	3	141	15C	+7.91
Bobbin			ODI	20	0.75	3	140	18C	+20.38
C/L Special I			VOL		0.35	1	95	17C	-1.63
C/L Special I			VOL		0.39	1	118	11C	+14.75
C/L Special I			VOL		0.49	1	101	14C	-3.04
Bobbin	6	13	NQI		1.62	P 1	144	TEC	+20.15
Bobbin			NQI		2.14	P 1	147	TSC	-1.14
Bobbin	6	17	NQI		3.02	P 1	155	TEC	+8.73
Bobbin			NQI		4.15	P 1	35	TEC	+7.55
Bobbin	6	18	ADI		2.23	6	60	11C	+20.65
Bobbin			ODI	33	0.73	3	126	11C	+20.05
C/L Special I			VOL		1.23	1	117	10C	-23.87
Bobbin	6	19	NQI		1.66	P 1	130	TEC	+20.18
Bobbin			NQI		1.91	P 1	123	TSC	-1.11
Bobbin	6	22	NQI		1.84	P 1	103	TSC	+0.85
C/L Special I	6	34	SAI		0.65	1	35	18C	+12.55
Bobbin	6	44	ODI	1	0.44	3	145	22C	+5.21
Bobbin			ODI	19	0.70	3	141	22C	+5.26
C/L Special I			VOL		0.76	1	21	22C	+5.70
Bobbin	6	64	NQI		5.20	P 1	111	TEH	+15.92
H/L Tubesheet			SAI		5.11	1	8	TSH	-5.54
Bobbin	6	74	NQI		0.27	3	77	12C	+26.09
C/L Special I			VOL		0.39	1	79	12C	+26.17
Bobbin	6	84	NQI		0.29	P 1	61	03H	+0.00
H/L Tubesheet			SAI		0.65	1	18	TSH	-0.07
H/L Special I			SAI		0.41	1	38	03H	-0.02
Bobbin	6	85	NQI		0.29	P 1	78	03H	+0.09
H/L Tubesheet			SAI		0.25	1	39	TSH	-0.03
H/L Special I			SAI		0.49	1	40	03H	+0.08
U-Bend	6	92	VOL		1.33	1	152	09C	+7.37
Bobbin			ODI	3	0.59	3	141	07H	+35.50
Bobbin			ODI	7	1.22	3	143	09C	+7.16
H/L Special I			VOL		0.52	1	128	08H	-9.64
Bobbin	6	93	NQI		0.88	3	95	02H	+17.17
H/L Special I			VOL		1.27	1	113	03H	-6.93
Bobbin	6	99	NQI		6.04	P 1	91	TEH	+15.98
Bobbin	6	103	ODI	8	0.92	3	136	05H	+6.33
H/L Special I			VOL		0.35	1	102	05H	+6.04
H/L Tubesheet	6	109	SAI		0.49	1	21	TSH	-0.05

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	7	9	ODI	13	0.55	3	137	05H	+10.04
H/L Special I			VOL		0.53	1	139	05H	+9.55
Bobbin	7	14	NQI		1.05	P 1	81	TSC	-0.93
Bobbin	7	22	NQI		1.21	P 1	100	03H	+0.10
H/L Special I			SAI		0.96	1	76	03H	+0.10
Bobbin	7	26	ODI	7	1.95	4	143	16C	-1.48
C/L Special I			VOL		1.53	1	122	16C	-1.18
Bobbin	7	36	NQI		0.42	P 1	47	03H	+0.11
H/L Special I			MAI		0.14	1	93	03H	+0.11
Bobbin	7	43	NQI		0.54	P 1	45	03H	+0.00
H/L Special I			SAI		0.36	1	67	03H	+0.00
Bobbin	7	72	NQI		58.86	P 1	29	TEH	+16.64
H/L Tubesheet			MAI		19.38	1	32	TSH	-4.50
Bobbin	7	81	NQI		30.65	P 1	36	TEH	+3.36
Bobbin			NQI		40.68	P 1	31	TEH	+3.52
Bobbin	7	94	NQI		6.09	P 1	81	TEH	+16.10
Bobbin	7	107	ODI	36	0.81	3	109	04H	+14.67
H/L Special I			VOL		1.27	1	96	04H	+14.70
Bobbin	8	9	ADI		3.15	6	77	12C	+37.34
C/L Special I			VOL		1.06	1	133	11C	-7.26
Bobbin	8	11	NQI		0.87	P 1	85	03H	+0.06
H/L Special I			SAI		0.85	1	66	03H	+0.06
Bobbin	8	32	NQI		0.69	P 1	34	02H	+0.13
H/L Special I			MAI		0.43	1	65	02H	+0.13
Bobbin	8	43	NQI		0.30	P 1	105	04H	+0.09
Bobbin			NQI		0.35	P 1	99	03H	-0.06
H/L Special I			SAI		0.26	1	39	04H	+0.09
H/L Special I			SAI		0.37	1	66	03H	-0.06
Bobbin	8	62	NQI		0.63	P 1	42	02H	+0.00
H/L Special I			SAI		0.53	1	79	02H	+0.03
Bobbin	8	81	ADI		2.62	6	79	13C	+6.83
C/L Special I			VOL		1.29	1	115	13C	+8.02
Bobbin	8	84	NQI		19.52	P 1	103	TEH	+7.02
Bobbin	8	110	NQI		1.12	P 1	38	03H	+0.05
H/L Special I			SAI		0.74	1	52	03H	+0.01
Bobbin	9	10	NQI		1.57	P 1	110	TSC	-0.96
Bobbin	9	14	NQI		1.68	P 1	116	TSC	-0.97
Bobbin	9	47	NQI		0.66	3	108	06H	+24.81
H/L Special I			VOL		0.86	1	118	06H	+24.81
Bobbin	9	56	ODI	4	0.63	3	144	04H	+21.39
Bobbin			ODI	7	0.83	3	142	12C	+21.78
C/L Special I			VOL		0.60	1	69	11C	-21.86
H/L Special I			VOL		0.46	1	118	04H	+21.55
Bobbin	9	79	NQI		12.50	P 1	60	TEH	+13.79
Bobbin			NQI		21.69	P 1	160	TEH	+12.50
Bobbin	9	86	ODI	12	0.36	3	134	13C	+16.10
C/L Special I			VOL		0.33	1	162	13C	+16.71
C/L Special I			VOL		0.44	1	97	13C	+13.28
Bobbin	9	89	ODI	23	0.61	3	123	03H	+37.93
H/L Special I			VOL		1.21	1	119	04H	-6.16
Bobbin	9	90	NQI		0.76	3	117	AV1	+2.19
U-Bend			VOL		1.83	1	173	AV1	+2.28
Bobbin	9	111	NQI		0.68	P 1	87	03H	-0.02
H/L Special I			SAI		0.75	1	53	03H	+0.00
Bobbin	9	112	ODI	12	1.35	3	134	13C	+11.41
C/L Special I			VOL		1.07	1	124	13C	+11.36
C/L Special I			VOL		1.08	1	128	13C	+6.73
Bobbin	10	13	ADI		0.78	6	64	07H	+19.51
H/L Special I			VOL		0.29	1	150	07H	+19.51
Bobbin	10	33	ODI	33	0.45	3	119	11C	+40.31
C/L Special I			VOL		1.59	1	131	10C	-3.86
Bobbin	10	49	ODI	22	0.88	4	130	21C	+2.51
C/L Special I			VOL		0.86	1	141	21C	+2.41
Bobbin	10	59	NQI		2.32	P 1	61	TEC	+2.19
Bobbin	10	66	ODI	21	0.54	3	123	13C	+15.70

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
C/L Special I					0.70	1	40	13C	+16.14
Bobbin	10	67	NQI		0.73	3	106	03H	+35.07
H/L Special I					1.02	1	86	04H	-9.17
Bobbin	10	82	ODI	12	0.73	3	131	03H	+32.55
Bobbin			NQI		23.40	P 1	30	TEH	+13.06
Bobbin			NQI		23.84	P 1	99	TEH	+9.74
Bobbin	10	87	NQI		6.37	P 1	145	TEH	+18.03
H/L Tubesheet			MAI		3.89	1	37	TSH	-3.33
Bobbin	10	89	ODI	6	0.28	3	136	06H	+11.66
Bobbin			ODI	15	0.26	3	128	06H	+8.94
Bobbin	10	91	ODI	28	1.08	3	117	10C	+31.61
C/L Special I					1.84	1	122	10C	+31.14
H/L Tubesheet	10	106	SAI		0.41	1	35	TSH	-0.03
Bobbin	11	34	ADI		1.88	6	67	11C	+8.48
Bobbin			ODI	31	0.20	3	121	10C	+41.31
C/L Special I					0.14	1	64	09C	-3.48
C/L Special I					0.39	1	90	11C	+8.59
Bobbin	11	40	ODI	25	0.62	4	138	05H	+23.56
Bobbin			ODI	30	1.26	3	122	12C	+13.96
C/L Special I					1.05	1	92	12C	+14.10
H/L Special I					1.23	1	39	05H	+23.56
Bobbin	11	59	ODI	15	1.09	3	128	11C	+26.09
C/L Special I					0.47	1	134	11C	+28.71
C/L Special I					1.23	1	116	11C	+26.12
H/L Tubesheet	11	64	SAI		1.42	1	26	TSH	-4.46
Bobbin	11	73	NQI		0.42	3	96	06H	+23.62
H/L Special I					1.60	1	117	07H	-20.88
Bobbin	11	78	ADI		2.16	6	82	04H	+11.82
Bobbin			ODI	6	1.11	3	136	18C	+11.33
C/L Special I					0.95	1	122	17C	-11.22
H/L Special I					0.83	1	88	04H	+11.10
H/L Tubesheet	11	87	SAI		1.31	1	26	TSH	-2.31
Bobbin	11	94	NQI		1.61	P 1	56	TEH	+6.86
Bobbin	11	105	NQI		22.01	P 1	145	TEH	+4.00
Bobbin	11	107	NQI		0.79	3	96	TSC	+1.68
C/L Special I					0.91	1	95	TSC	+1.59
Bobbin	12	53	ADI		1.25	6	81	21C	+2.63
C/L Special I					0.15	1	115	21C	+2.46
Bobbin	12	68	NQI		0.60	P 1	93	02H	+0.00
H/L Special I			MAI		0.54	1	128	02H	-0.03
Bobbin	12	73	ODI	20	0.43	3	124	08H	+1.26
Bobbin	12	81	ADI		1.00	6	78	13C	+17.22
C/L Special I					0.27	1	125	12C	-4.66
Bobbin	12	88	NQI		4.50	P 1	53	TEH	+16.78
H/L Tubesheet			SAI		3.68	1	27	TSH	-4.35
Bobbin	12	110	ODI	24	0.48	3	121	16C	-1.38
C/L Special I					0.66	1	101	16C	-1.53
Bobbin	13	7	ODI	38	0.53	3	114	18C	+15.25
C/L Special I					0.20	1	72	17C	-6.65
Bobbin	13	10	ODI	36	0.68	3	116	05H	+19.49
H/L Special I					0.42	1	146	05H	+19.49
Bobbin	13	64	NQI		8.07	P 1	92	TEH	+16.14
Bobbin	13	82	NQI		68.96	P 1	53	TEH	+5.30
Bobbin	14	53	ADI		1.71	6	67	22C	+10.62
C/L Special I					0.75	1	112	21C	-15.00
C/L Special I					0.76	1	92	21C	-4.12
C/L Special I					0.81	1	104	21C	-9.94
Bobbin	14	75	ADI		2.60	6	71	TSC	+4.05
Bobbin			NQI		0.99	P 1	85	TEH	+11.32
Bobbin			NQI		2.25	P 1	26	TEH	+10.41
C/L Special I					0.98	1	118	TSC	+4.27
Bobbin	14	81	NQI		8.17	P 1	37	TEH	+10.76
Bobbin			NQI		50.80	P 1	190	TEH	+12.87
Bobbin	14	93	NQI		3.41	P 1	73	TEH	+12.28
C/L Special I	14	107	SAI		0.45	1	75	18C	+5.31

## ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	15	12	ODI	14	0.42	3	132	05H	+34.55
Bobbin	15	16	NQI		3.72	P 1	58	TEC	+8.50
Bobbin	15	32	IDI	31	4.39	P 1	11	TEH	+9.29
Bobbin	15	37	NQI		38.32	P 1	13	TEH	+15.36
Bobbin	15	55	ADI		3.15	6	75	07H	+14.19
H/L Special I			VOL		1.90	1	117	07H	+15.07
Bobbin	15	64	ODI	3	0.52	3	142	10C	+17.59
Bobbin			ODI	3	0.82	3	142	10C	+27.46
Bobbin			ODI	7	0.69	3	139	10C	+10.40
Bobbin			ODI	10	0.76	4	138	10C	+12.24
C/L Special I			VOL		0.29	1	145	10C	+18.12
C/L Special I			VOL		0.36	1	101	10C	+10.74
C/L Special I			VOL		0.38	1	130	10C	+16.27
C/L Special I			VOL		0.50	1	104	10C	+12.69
C/L Special I			VOL		0.72	1	103	10C	+28.80
Bobbin	15	67	NQI		0.22	P 1	148	03H	+0.00
Bobbin	15	70	NQI		0.60	3	103	06H	+13.28
H/L Special I			VOL		1.23	1	146	06H	+13.32
Bobbin	15	95	ODI	15	0.82	3	130	18C	+6.61
C/L Special I			VOL		0.36	1	119	18C	+6.55
H/L Tubesheet	15	108	SAI		0.64	1	34	TSH	-0.08
Bobbin	16	22	NQI		6.66	3	11	01H	+14.62
Bobbin	16	54	ADI		1.35	6	73	12C	+6.08
Bobbin			ADI		4.34	6	81	11C	+24.55
C/L Special I			VOL		0.35	1	112	12C	+5.64
C/L Special I			VOL		1.20	1	108	11C	+24.15
Bobbin	16	60	NQI		8.51	P 1	25	TEH	+10.37
Bobbin	16	69	NQI		11.02	P 1	17	TEH	+14.40
Bobbin	16	70	NQI		2.02	3	29	AV1	+5.53
U-Bend			VOL		1.95	1	140	AV1	+9.55
Bobbin	16	80	NQI		0.26	P 1	80	03H	+0.00
Bobbin	16	92	NQI		9.36	P 1	29	TEH	+15.64
Bobbin			NQI		17.23	P 1	35	TEH	+8.54
Bobbin	16	99	NQI		18.83	P 1	189	TEH	+15.53
Bobbin	17	14	ADI		2.71	6	77	10C	+23.73
C/L Special I			VOL		0.73	1	102	09C	-21.50
Bobbin	17	53	ADI		4.25	6	69	TSC	+2.93
C/L Special I			VOL		1.74	1	108	TSC	+2.49
H/L Tubesheet	17	84	SAI		0.26	1	61	TSH	-0.10
Bobbin	17	89	ODI	12	1.09	3	134	03H	+21.21
H/L Special I			VOL		0.77	1	72	04H	-23.05
Bobbin	17	100	ODI	3	1.07	3	142	04H	+7.16
H/L Special I			VOL		2.33	1	149	04H	+7.06
Bobbin	17	101	NQI		5.71	P 1	173	TEH	+15.17
Bobbin	17	102	ADI		2.24	6	59	18C	+7.27
Bobbin			ADI		2.28	6	81	13C	+2.46
Bobbin			ODI	12	0.78	3	134	13C	+19.00
Bobbin			ODI	16	1.24	4	133	07H	+26.48
Bobbin			ODI	20	1.32	4	128	22C	+5.37
Bobbin			ODI	25	0.49	3	121	07H	+41.82
C/L Special I			VOL		0.57	1	123	18C	+7.54
C/L Special I			VOL		0.69	1	83	13C	+2.84
C/L Special I			VOL		0.73	1	109	13C	+18.12
C/L Special I			VOL		1.29	1	109	22C	+5.14
H/L Special I			VOL		0.88	1	145	08H	-2.25
H/L Special I			VOL		0.95	1	113	08H	-18.61
Bobbin	18	13	ADI		1.85	6	66	10C	+27.04
C/L Special I			VOL		0.92	1	109	09C	-16.87
Bobbin	18	23	ODI	18	0.43	3	107	20C	+2.52
C/L Special I			VOL		0.69	1	85	20C	+2.64
Bobbin	18	36	ODI	15	0.53	3	114	03H	+34.48
Bobbin	18	55	ODI	1	1.29	3	150	04H	+41.56
Bobbin			ODI	7	0.58	3	130	07H	+23.32
Bobbin			ODI	22	0.64	3	101	18C	+19.05
C/L Special I			VOL		0.66	1	98	17C	-2.93

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS  
 INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
H/L Special I					0.72	1	118	07H	+23.28
H/L Special I					1.13	1	115	05H	-2.87
Bobbin	18	61	ODI	12	0.90	3	134	01H	+1.16 to +7.24
Bobbin	18	75	ODI	15	0.81	4	134	04H	+7.09
Bobbin			NQI		10.63	3	123	TEH	+7.24
Bobbin	18	77	NQI		0.56	3	69	04H	+28.94
H/L Special I					0.38	1	145	05H	-15.12
H/L Tubesheet	18	78	SAI		1.50	1	34	TSH	-0.11
H/L Special I	18	86	VOL		0.58	1	75	04H	+22.11
Bobbin	18	93	NQI		10.77	P 1	170	TEH	+8.53
Bobbin	18	101	ODI	7	0.91	3	139	05H	+23.87
H/L Special I					0.82	1	128	06H	-20.57
Bobbin	18	104	ODI	51	0.93	3	95	03H	+16.69
H/L Special I					1.45	1	50	03H	+16.75
Bobbin	18	110	WAR	17	0.79	P 4	0	AV1	+0.00
Bobbin	19	12	WAR	9	0.34	P 4	0	AV1	+0.00
Bobbin	19	20	ODI	2	1.15	3	143	12C	+25.11
C/L Special I					1.01	1	106	11C	-18.51
Bobbin	19	39	ODI	1	0.63	3	147	02H	+5.43
H/L Special I					2.09	1	117	02H	+5.65
Bobbin	19	40	ODI	7	0.46	3	132	06H	+33.92
Bobbin				11	0.38	3	121	06H	+28.92
H/L Special I					0.78	1	133	06H	+29.88
H/L Special I					0.79	1	143	06H	+27.39
Bobbin	19	41	ODI	35	0.49	3	83	07H	+21.39
H/L Special I					0.34	1	91	07H	+21.39
Bobbin	19	57	ODI	3	0.80	3	141	15C	+4.19
C/L Special I					0.98	1	115	15C	+4.05
Bobbin	19	82	NQI		11.28	P 1	61	TEH	+3.63
Bobbin	19	86	NQI		0.73	3	91	03H	+23.31
H/L Special I					0.72	1	88	04H	-20.82
Bobbin	20	9	ODI	30	0.81	3	120	13C	+12.15
C/L Special I					0.74	1	100	12C	-9.79
Bobbin	20	12	ODI	35	1.09	3	116	11C	+17.26
C/L Special I					1.00	1	103	11C	+17.09
Bobbin	20	41	NQI		3.37	P 1	56	TEC	+3.33
Bobbin	20	52	NQI		2.96	P 1	144	TEC	+8.89
Bobbin	20	58	NQI		11.15	P 1	24	TEH	+7.17
Bobbin	20	59	NQI		2.96	P 1	77	TEC	+1.26
Bobbin	20	60	ODI	8	0.95	3	136	05H	+31.31
H/L Special I					0.97	1	77	06H	-13.03
Bobbin	20	76	ODI	4	0.72	3	140	12C	+2.38
Bobbin				16	0.67	4	132	10C	+9.64
C/L Special I					0.68	1	82	10C	+9.56
C/L Special I					0.70	1	40	12C	+2.25
Bobbin	20	78	NQI		0.47	3	49	TSH	+11.74
Bobbin	21	9	ODI	5	0.57	3	141	07H	+25.26
Bobbin				6	0.31	3	140	20C	-1.31
C/L Special I					0.45	1	128	20C	-1.31
H/L Special I					0.66	1	131	07H	+25.26
H/L Special I					0.70	1	126	07H	+25.41
Bobbin	21	10	ODI	4	0.68	3	142	10C	+23.90
C/L Special I					0.69	1	112	09C	-20.20
Bobbin	21	22	ODI	2	0.68	4	155	21C	+5.21
Bobbin				19	0.30	3	130	20C	+4.01
C/L Special I					0.51	1	113	21C	+2.86
C/L Special I					0.60	1	113	20C	+3.62
C/L Special I					0.81	1	123	21C	+5.13
Bobbin	21	31	NQI		0.21	P 1	92	01H	+0.19
Bobbin	21	36	ODI	5	0.56	3	141	08H	+2.97
Bobbin	21	41	WAR	17	0.79	P 4	0	AV3	+0.00
Bobbin	21	52	NQI		0.19	P 1	134	04H	+0.11
Bobbin	21	53	WAR	9	0.35	P 4	0	AV4	+0.00
Bobbin				18	0.85	P 4	0	AV1	+0.00
Bobbin	21	56	NQI		16.16	P 1	58	TEH	+0.63



ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS  
INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	21	75	ADI		1.30	6	75	05H	+35.52
Bobbin			ADI		1.60	6	70	05H	+30.39
Bobbin			ADI		1.82	6	63	05H	+26.30
H/L Special I			VOL		0.63	1	150	06H	-9.11
H/L Special I			VOL		0.83	1	156	06H	-1.22
H/L Special I			VOL		1.05	1	164	06H	-2.22
H/L Special I			VOL		1.15	1	157	06H	-14.56
Bobbin	21	81	ADI		0.82	6	72	04H	+10.76
H/L Special I			VOL		1.88	1	173	04H	+10.53
Bobbin	21	86	ODI	30	0.52	3	115	11C	+17.11
C/L Special I			VOL		0.30	1	131	11C	+17.49
Bobbin	21	109	ADI		2.89	6	73	07H	+27.03
H/L Special I			VOL		1.71	1	109	08H	-17.20
Bobbin	22	37	ODI	20	0.70	3	129	03H	+27.28
Bobbin	22	56	ODI	21	0.75	4	127	03H	+31.86
Bobbin	22	60	NQI		0.55	3	105	11C	+29.64
C/L Special I			VOL		0.57	1	88	11C	+29.96
Bobbin	22	67	NQI		4.12	P 1	140	TEC	+10.34
Bobbin	22	99	ADI		4.00	6	75	07H	+37.36
Bobbin			ADI		5.09	6	77	02H	+5.13
H/L Special I			VOL		1.85	1	117	08H	-7.12
H/L Special I			VOL		3.60	1	138	02H	+4.64
Bobbin	22	105	ADI		5.59	6	66	08H	+12.02
U-Bend			VOL		1.45	1	73	08H	+11.51
Bobbin	23	31	ODI	12	1.40	3	135	22C	+16.30
C/L Special I			VOL		0.98	1	87	21C	-3.56
Bobbin	23	36	ADI		1.20	6	77	07H	+40.81
H/L Special I			VOL		1.00	1	117	08H	-1.75
H/L Tubesheet	23	46	MCI		1.09	1	20	TSH	+0.13
Bobbin	23	63	NQI		0.59	P 1	28	04H	-0.14
H/L Tubesheet	23	66	SAI		0.41	1	44	TSH	+0.00
H/L Tubesheet			VOL		1.18	1	24	TSH	+0.01
Bobbin	23	104	NQI		9.63	P 1	34	TEH	+1.56
U-Bend	24	28	VOL		1.31	1	34	09C	+2.82
H/L Tubesheet	24	87	SAI		0.60	1	58	TSH	+0.10
Bobbin	25	42	ADI		1.60	6	77	07H	+3.36
H/L Special I			VOL		0.61	1	92	07H	+3.94
Bobbin	25	64	ODI	8	0.44	3	136	08H	+2.13
Bobbin	25	67	ODI	9	0.59	3	135	04H	+8.55
H/L Special I			VOL		1.12	1	166	04H	+8.59
Bobbin	25	69	NQI		0.82	3	71	03H	+38.58
Bobbin			ODI	9	0.54	3	132	05H	+39.55
Bobbin			ODI	16	0.27	3	111	05H	+38.83
H/L Special I			VOL		0.31	1	113	06H	-5.51
H/L Special I			VOL		0.39	1	142	06H	-4.77
H/L Special I			VOL		0.43	1	132	04H	-3.71
H/L Special I			VOL		0.77	1	134	04H	-5.90
Bobbin	25	70	ODI	4	0.24	3	138	20C	+3.63
Bobbin			ODI	13	0.22	3	130	02H	+10.76
Bobbin			ODI	13	0.40	4	143	20C	+4.63
Bobbin			ODI	35	0.13	3	108	04H	+30.41
C/L Special I			VOL		0.16	1	132	20C	+1.25
C/L Special I			VOL		0.41	1	135	20C	+4.76
C/L Special I			VOL		0.45	1	139	20C	+3.35
H/L Special I			VOL		0.49	1	103	05H	-14.83
H/L Special I			VOL		1.13	1	160	02H	+10.71
Bobbin	25	75	ADI		1.80	6	64	03H	+10.78
Bobbin	25	78	ODI	15	0.70	3	128	04H	+11.18
H/L Special I			VOL		1.16	1	128	04H	+11.49
Bobbin	25	94	NQI		9.43	P 1	18	TEH	+16.36
H/L Special I			SAI		3.22	1	21	TSH	-5.03
Bobbin	26	39	NQI		45.91	P 1	40	TEH	+12.19
Bobbin	26	61	NQI		8.57	P 1	20	TEH	+13.47
Bobbin	26	66	NQI		3.17	P 1	55	TEH	+3.57
Bobbin	26	69	ODI	35	0.72	3	111	16C	+3.29

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			NQI		0.13	P 1	74	03H	-0.11
C/L Special I			VOL		0.70	1	108	16C	+2.95
Bobbin	26	76	ODI	9	0.60	3	132	04H	+13.43
H/L Special I			VOL		1.04	1	120	04H	+13.30
Bobbin	26	84	WAR	18	0.74	P 4	0	AV1	+0.00
Bobbin	26	87	ADI		2.34	6	95	03H	+19.32
H/L Special I			VOL		1.56	1	117	03H	+19.02
Bobbin	26	94	NQI		2.29	P 1	36	TSC	-1.16
Bobbin	27	19	ADI		2.11	6	81	07H	+6.66
H/L Special I			VOL		0.61	1	99	07H	+7.06
Bobbin	27	22	ODI	6	0.71	3	139	11C	+2.49
C/L Special I			VOL		0.89	1	131	11C	+2.71
Bobbin	27	58	ODI	9	1.48	3	137	07H	+34.04
H/L Special I			VOL		1.25	1	121	08H	-10.62
Bobbin	27	71	NQI		15.02	P 1	24	TEH	+18.33
H/L Tubesheet			MAI		5.92	1	32	TSH	-3.40
Bobbin	27	76	ODI	23	0.71	3	123	11C	+28.29
C/L Special I			VOL		0.71	1	145	11C	+27.87
H/L Tubesheet	27	91	SAI		1.53	1	15	TSH	+0.01
Bobbin	27	98	ADI		3.80	6	84	20C	+1.52
C/L Special I			VOL		0.27	1	116	20C	+1.88
Bobbin	28	10	ADI		2.41	6	80	12C	+18.51
C/L Special I			VOL		0.78	1	94	12C	+18.17
Bobbin	28	21	ODI	15	0.78	3	113	22C	+11.32
C/L Special I			VOL		0.78	1	102	21C	-8.10
Bobbin	28	34	ODI	20	0.50	3	104	21C	+2.30
H/L Tubesheet	28	35	SAI		3.49	1	21	TSH	-4.24
Bobbin	28	70	NQI		14.04	P 1	27	TEH	+17.25
H/L Tubesheet			MAI		4.43	1	31	TSH	-4.72
U-Bend	28	75	VOL		1.10	1	156	09C	+4.37
Bobbin			ODI	21	0.13	3	125	10C	+12.35
Bobbin			ODI	22	0.45	3	124	09C	+4.47
Bobbin			ODI	25	0.40	3	121	10C	+7.35
C/L Special I			VOL		0.29	1	100	10C	+13.35
C/L Special I			VOL		0.36	1	135	10C	+7.37
Bobbin	28	80	NQI		0.65	3	67	AV1	+8.79
U-Bend			VOL		0.55	1	45	AV1	+8.97
Bobbin	28	84	WAR	16	0.71	P 4	46	AV3	+0.00
H/L Tubesheet	28	100	MAI		0.59	1	37	TSH	-0.17
Bobbin	28	101	ADI		3.14	6	82	11C	+28.51
C/L Special I			VOL		0.58	1	101	11C	+28.51
Bobbin	29	17	ODI	5	1.23	3	135	03H	+18.40
H/L Special I			VOL		1.23	1	109	03H	+18.90
Bobbin	29	39	ADI		2.27	6	62	10C	+22.38
C/L Special I			VOL		1.38	1	81	09C	-21.89
Bobbin	29	61	NQI		10.95	P 1	145	TEH	+14.98
Bobbin	29	62	WAR	12	0.50	P 4	0	AV1	+0.00
Bobbin	29	63	WAR	9	0.35	P 4	0	AV1	+0.14
Bobbin	29	67	WAR	12	0.50	P 4	0	AV1	+0.00
Bobbin	29	69	ADI		1.46	6	64	04H	+21.48
H/L Special I			VOL		0.76	1	143	05H	-23.16
Bobbin	29	72	ODI	28	0.84	3	118	03H	+29.15
H/L Special I			VOL		0.21	1	76	04H	-16.24
H/L Special I			VOL		0.59	1	96	04H	-14.75
Bobbin	29	73	ODI	4	0.69	3	141	04H	+10.25
H/L Special I			VOL		0.45	1	143	04H	+10.37
Bobbin	29	76	NQI		7.96	P 1	133	TEH	+16.47
Bobbin	29	79	NQI		0.28	3	54	04H	+15.98
Bobbin			NQI		0.90	3	157	18C	+17.85
C/L Special I			VOL		0.20	1	162	17C	-3.77
H/L Special I			VOL		0.91	1	99	04H	+15.82
H/L Special I			VOL		1.16	1	115	04H	+20.60
H/L Tubesheet	29	102	SAI		0.72	1	24	TSH	+0.17
Bobbin	29	103	NQI		22.72	P 1	35	TEH	+18.32
H/L Tubesheet			MAI		2.55	1	23	TSH	-3.40

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS  
INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
H/L Tubesheet	29	105	SAI		0.62	1	6	TSH	+0.16	TSH
Bobbin	30	15	ODI	12	0.53	3	119	10C	+42.01	F/L
C/L Special I			VOL		0.96	1	110	09C	-2.07	09C
Bobbin	30	24	ADI		1.69	6	61	17C	+7.81	F/L
C/L Special I			VOL		0.62	1	85	17C	+7.92	16C
Bobbin	30	26	NQI		0.93	3	127	08H	+3.58	F/L
U-Bend			VOL		1.93	1	135	08H	+3.76	08H
Bobbin	30	35	NQI		0.39	3	97	07H	+12.77	F/L
H/L Special I			VOL		0.50	1	110	07H	+12.57	07H
Bobbin	30	60	ODI	8	0.68	3	138	03H	+4.17	F/L
H/L Special I			VOL		0.25	1	77	03H	+4.54	03H
Bobbin	30	66	ADI		1.09	6	59	07H	+24.37	F/L
H/L Special I			VOL		0.63	1	150	08H	-19.83	08H
Bobbin	30	82	WAR	14	0.62	P 4	32	AV1	+0.00	F/L
Bobbin	30	95	NQI		3.43	P 3	86	TSH	-0.12	F/L
Bobbin	31	14	NQI		4.05	P 1	101	TEC	+3.04	F/L
H/L Tubesheet	31	20	VOL		0.32	1	34	TSH	-0.38	TSH
H/L Tubesheet			VOL		0.41	1	115	TSH	-1.61	TSH
Bobbin	31	29	WAR	11	0.46	P 4	0	AV4	+0.00	F/L
Bobbin	31	38	WAR	26	1.55	P 4	0	AV3	+0.00	F/L
Bobbin	31	40	ODI	9	1.03	3	136	06H	+30.43	F/L
H/L Special I			VOL		1.19	1	130	07H	-14.36	07H
Bobbin	31	46	WAR	12	0.48	P 4	0	AV1	+0.00	F/L
H/L Special I			VOL		1.15	1	104	06H	+13.67	06H
Bobbin	31	60	NQI		0.23	3	128	11C	+13.02	F/L
C/L Special I			VOL		0.39	1	106	11C	+13.02	11C
Bobbin	31	88	NQI		3.20	P 1	20	TEH	+10.66	F/L
Bobbin	31	89	NQI		2.76	P 1	27	TEH	+6.86	F/L
Bobbin	31	91	ODI	10	1.82	3	134	04H	+16.73	F/L
H/L Special I			VOL		1.56	1	116	04H	+16.63	04H
H/L Special I			VOL		2.23	1	134	04H	+16.52	04H
Bobbin	31	101	ADI		4.65	6	81	AV4	+9.04	F/L
U-Bend			VOL		1.29	1	51	AV4	+10.75	AV4
Bobbin	31	104	ODI	36	0.37	3	109	10C	+7.00	F/L
C/L Special I			VOL		0.31	1	77	10C	+6.77	10C
Bobbin	32	12	ODI	13	0.58	3	133	06H	+25.70	F/L
H/L Special I			VOL		0.54	1	102	06H	+25.97	06H
Bobbin	32	18	WAR	10	0.40	P 4	0	AV1	+0.00	F/L
Bobbin	32	19	WAR	8	0.31	P 4	0	AV1	+0.00	F/L
Bobbin	32	26	WAR	17	0.78	P 4	0	AV2	+0.00	F/L
Bobbin	32	27	WAR	24	1.40	P 4	0	AV3	+0.00	F/L
Bobbin	32	46	NQI		0.43	3	66	10C	+5.02	F/L
Bobbin			ODI	18	1.46	4	128	10C	+9.24	F/L
C/L Special I			VOL		0.69	1	104	10C	+5.16	10C
C/L Special I			VOL		1.06	1	115	10C	+8.92	10C
Bobbin	32	48	WAR	20	0.97	P 4	0	AV3	+0.00	F/L
Bobbin	32	50	NQI		3.52	P 1	145	TSC	-1.23	F/L
Bobbin	32	51	NQI		4.67	P 1	150	TSC	-1.21	F/L
Bobbin	32	65	ADI		1.59	6	57	11C	+34.58	F/L
C/L Special I			VOL		0.57	1	144	10C	-9.42	10C
Bobbin	32	83	NQI		0.58	3	86	12C	+19.75	F/L
C/L Special I			VOL		1.33	1	126	12C	+20.49	12C
Bobbin	32	99	NQI		6.79	P 1	85	TEH	+12.16	F/L
Bobbin	33	31	NQI		6.72	P 1	156	TSC	-1.18	F/L
Bobbin	33	33	NQI		3.88	P 1	150	TEC	+15.68	F/L
Bobbin	33	46	NQI		2.27	P 1	113	TSC	-1.23	F/L
Bobbin	33	50	NQI		4.61	P 1	151	TSC	-1.22	F/L
Bobbin	33	59	NQI		0.95	3	90	10C	+20.61	F/L
C/L Special I			VOL		1.14	1	97	10C	+20.61	10C
Bobbin	33	62	NQI		3.38	P 1	158	TSC	-1.04	F/L
Bobbin	33	70	NQI		1.18	P 1	119	TEC	+1.43	F/L
Bobbin	33	73	ODI	5	0.52	4	154	05H	+36.55	F/L
H/L Special I			VOL		0.44	1	119	06H	-7.64	06H
H/L Special I			VOL		1.31	1	129	06H	-0.81	06H
Bobbin	33	75	NQI		0.83	P 1	94	TEH	+3.04	F/L

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin			WAR	10	0.40	P 4	0	AV3	+0.00
Bobbin	33	79	NQI		0.89	3	109	07H	+31.87
H/L Special I			VOL		0.25	1	96	08H	-14.21
H/L Special I			VOL		0.30	1	83	08H	-17.04
H/L Special I			VOL		0.53	1	92	08H	-8.87
H/L Special I			VOL		0.63	1	102	08H	-12.37
Bobbin	33	87	ODI	6	0.49	3	138	13C	+13.08
C/L Special I			VOL		0.67	1	123	13C	+12.89
Bobbin	33	88	ODI	16	0.74	P 4	0	AV1	+0.00
Bobbin	33	89	ODI	12	0.55	3	132	12C	+25.22
Bobbin	33	102	NQI		0.22	3	101	09C	+6.16
Bobbin	34	14	WAR	10	0.41	P 4	0	AV1	+0.00
Bobbin	34	16	WAR	9	0.37	P 4	0	AV1	+0.00
Bobbin	34	17	WAR	19	0.90	P 4	0	AV1	+0.00
Bobbin	34	23	WAR	8	0.33	P 4	0	AV1	+0.00
Bobbin	34	27	WAR	23	1.27	P 4	0	AV3	+0.00
Bobbin	34	33	ODI	5	2.97	3	133	02H	+13.02
H/L Special I			VOL		1.38	1	126	02H	+14.42
Bobbin	34	40	ODI	37	0.89	3	112	13C	+2.03
C/L Special I			VOL		0.60	1	100	13C	+2.09
Bobbin	34	43	NQI		4.64	P 1	133	TSC	-1.23
Bobbin	34	44	NQI		0.67	3	82	09C	+6.00
U-Bend			VOL		1.16	1	121	09C	+6.03
Bobbin	34	45	ADI		2.84	6	79	03H	+4.14
Bobbin	34	46	ADI		2.91	6	60	AV4	+17.21
U-Bend			VOL		0.59	1	85	AV4	+17.69
U-Bend			VOL		0.59	1	122	AV3	+0.36
Bobbin	34	49	WAR	11	0.46	P 4	0	AV1	+0.00
Bobbin	34	63	NQI		0.43	3	105	13C	+13.31
Bobbin			NQI		0.66	3	106	11C	+5.23
Bobbin			ODI	5	1.24	4	155	12C	+30.97
Bobbin			ODI	20	0.60	3	126	11C	+2.46
C/L Special I			VOL		0.31	1	69	11C	-13.18
C/L Special I			VOL		0.81	1	108	11C	+2.16
C/L Special I			VOL		0.94	1	105	13C	+13.34
C/L Special I			VOL		1.03	1	115	11C	+5.43
Bobbin	34	64	NQI		1.56	P 1	145	TEC	+15.47
Bobbin	34	68	NQI		1.06	P 1	76	TEH	+2.47
Bobbin	34	70	ODI	6	1.02	4	153	13C	+5.06
Bobbin			NQI		3.40	P 1	161	TEH	+13.99
C/L Special I			VOL		0.78	1	121	13C	+6.68
Bobbin	34	72	ODI	17	0.63	4	138	07H	+18.08
Bobbin			NQI		3.09	P 1	26	TEH	+5.84
H/L Special I			VOL		1.05	1	135	07H	+17.73
Bobbin	34	78	ODI	20	0.57	3	125	10C	+15.72
C/L Special I			VOL		0.38	1	111	10C	+15.74
Bobbin	34	79	NQI		3.94	P 1	34	TEH	+5.21
Bobbin	35	15	WAR	12	0.51	P 4	0	AV3	+0.00
Bobbin	35	17	WAR	14	0.60	P 4	0	AV1	+0.00
Bobbin	35	18	WAR	14	0.62	P 4	0	AV1	+0.00
Bobbin	35	39	WAR	19	0.90	P 4	0	AV4	+0.00
Bobbin	35	40	WAR	26	1.54	P 4	0	AV2	+0.00
Bobbin	35	51	WAR	18	0.84	P 4	0	AV1	+0.00
Bobbin	35	52	ODI	6	1.26	4	152	13C	+15.11
Bobbin			WAR	10	0.40	P 4	0	AV1	+0.00
Bobbin			WAR	12	0.52	P 4	0	AV2	+0.00
C/L Special I			VOL		0.84	1	99	12C	-6.99
Bobbin	35	56	ADI		2.44	6	64	10C	+2.18
C/L Special I			VOL		0.81	1	89	10C	+2.04
Bobbin	35	72	NQI		0.90	3	105	22C	+10.40
C/L Special I			VOL		0.77	1	111	22C	+9.65
Bobbin	35	76	ODI	3	0.94	3	142	05H	+31.65
H/L Special I			VOL		0.66	1	115	06H	-12.60
Bobbin	35	91	ADI		2.34	6	56	03H	+34.44
H/L Special I			VOL		0.65	1	59	04H	-9.48

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS  
INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION		EXTENT1
Bobbin	36	18	WAR	18	0.82	P 4	0	AV1	+0.00	F/L
Bobbin	36	21	NQI		0.44	3	110	15C	+1.41	F/L
Bobbin	36	26	ADI		1.04	6	47	06H	+16.10	F/L
Bobbin			ADI		1.34	6	52	07H	+15.40	F/L
Bobbin			ADI		2.05	6	86	07H	+21.33	F/L
Bobbin			ADI		2.19	6	90	07H	+18.38	F/L
H/L Special I			VOL		0.57	1	127	07H	+22.25	07H
Bobbin	36	35	WAR	10	0.41	P 4	0	AV3	+0.00	F/L
Bobbin	36	39	ADI		1.75	6	69	12C	+33.72	F/L
Bobbin			ODI	10	0.77	3	135	11C	+6.10	F/L
Bobbin			NQI		2.73	P 1	15	TEH	+17.32	F/L
Bobbin			WAR	16	0.74	P 4	0	AV2	+0.00	F/L
C/L Special I			VOL		1.01	1	92	11C	-10.09	11C
C/L Special I			VOL		1.26	1	101	11C	+6.37	11C
Bobbin	36	49	WAR	7	0.27	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	19	0.90	P 4	0	AV1	+0.00	F/L
Bobbin	36	51	WAR	18	0.83	P 4	0	AV1	+0.00	F/L
Bobbin	36	53	ODI	24	0.78	3	121	11C	+5.22	F/L
Bobbin			WAR	15	0.64	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	22	1.13	P 4	0	AV1	+0.00	F/L
C/L Special I			VOL		0.99	1	102	11C	+5.26	11C
Bobbin	36	83	NQI		2.60	3	161	AV4	-1.55	F/L
U-Bend			VOL		0.83	1	160	AV4	-1.75	AV4
Bobbin	36	100	NQI		0.37	3	103	12C	+32.15	F/L
C/L Special I			VOL		0.70	1	129	11C	-11.15	11C
Bobbin	37	20	WAR	16	0.73	P 4	0	AV2	+0.00	F/L
Bobbin	37	23	ODI	11	0.89	4	136	03H	+17.75	F/L
Bobbin			WAR	15	0.67	P 4	0	AV2	+0.00	F/L
H/L Special I			VOL		0.73	1	23	03H	+13.35	03H
H/L Special I			VOL		0.89	1	140	03H	+15.30	03H
H/L Special I			VOL		1.41	1	148	03H	+18.30	03H
Bobbin	37	29	ODI	18	1.42	4	125	18C	+14.73	F/L
C/L Special I			VOL		1.15	1	100	17C	-7.83	17C
Bobbin	37	35	WAR	17	0.77	P 4	0	AV3	+0.00	F/L
Bobbin	37	37	ODI	17	0.90	4	145	20C	+3.58	F/L
C/L Special I			VOL		0.87	1	108	20C	+3.26	19C
Bobbin	37	40	NQI		0.70	3	61	12C	+20.34	F/L
C/L Special I			VOL		0.20	1	87	12C	+19.61	12C
Bobbin	37	42	WAR	12	0.52	P 4	0	AV2	+0.00	F/L
Bobbin	37	46	ADI		1.29	6	61	12C	+8.21	F/L
Bobbin			ADI		2.55	6	48	14C	+4.26	F/L
Bobbin			ODI	4	1.34	3	141	18C	+10.57	F/L
Bobbin			WAR	18	0.86	P 4	0	AV1	+0.00	F/L
C/L Special I			VOL		1.37	1	78	18C	+10.91	18C
C/L Special I			VOL		1.92	1	110	14C	+4.12	14C
Bobbin	37	47	ODI	2	0.84	4	131	07H	+36.19	F/L
Bobbin			ODI	20	0.68	4	124	13C	+8.32	F/L
C/L Special I			VOL		0.61	1	103	13C	+8.17	13C
H/L Special I			VOL		0.62	1	100	08H	-7.90	08H
Bobbin	37	48	NQI		2.21	P 1	74	TSC	-1.22	F/L
Bobbin	37	53	WAR	12	0.48	P 4	0	AV1	+0.00	F/L
Bobbin	37	54	WAR	12	0.52	P 4	0	AV4	+0.00	F/L
Bobbin			WAR	18	0.83	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	22	1.13	P 4	0	AV1	+0.00	F/L
Bobbin	37	55	NQI		4.88	P 1	29	TEC	+15.12	F/L
Bobbin	37	58	NQI		3.10	P 1	10	TSH	-1.15	F/L
Bobbin	37	62	ODI	7	0.26	P 4	0	AV1	+0.00	F/L
Bobbin	37	65	NQI		2.10	P 1	81	TEC	+1.28	F/L
Bobbin	37	68	ODI	9	0.30	P 1	125	05H	-0.11	F/L
Bobbin	37	74	ODI	26	0.55	3	118	05H	+33.84	F/L
H/L Special I			VOL		0.23	1	83	06H	-10.31	06H
Bobbin	37	75	ADI		1.12	6	60	06H	+10.80	F/L
H/L Special I			VOL		0.78	1	160	06H	+10.50	06H
Bobbin	37	78	ODI	18	1.59	4	127	06H	+28.89	F/L
H/L Special I			VOL		0.91	1	102	07H	-15.26	07H

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1	
Bobbin	37	82	WAR	20	1.00	P 4	0	AV3	+0.00	F/L
Bobbin	37	84	ADI		1.63	6	77	05H	+12.49	F/L
H/L Special I			VOL		0.77	1	129	05H	+12.47	05H
Bobbin	37	89	WAR	12	0.51	P 4	0	AV2	+0.00	F/L
Bobbin	37	94	NQI		2.25	P 1	142	TSC	-0.58	F/L
Bobbin			NQI		3.37	P 1	31	TEC	+19.14	F/L
Bobbin	38	30	WAR	7	0.29	P 4	0	AV1	+0.00	F/L
Bobbin	38	38	WAR	23	1.27	P 4	0	AV3	+0.00	F/L
Bobbin	38	40	ODI	26	0.84	3	122	11C	+37.18	F/L
C/L Special I			VOL		1.32	1	121	10C	-6.86	10C
Bobbin	38	43	WAR	19	0.92	P 4	0	AV1	+0.00	F/L
Bobbin	38	46	WAR	15	0.68	P 4	0	AV1	+0.00	F/L
Bobbin	38	49	WAR	15	0.68	P 4	0	AV1	+0.00	F/L
Bobbin			WAR	17	0.78	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	26	1.53	P 4	0	AV3	+0.00	F/L
Bobbin	38	50	WAR	17	0.78	P 4	0	AV1	+0.00	F/L
Bobbin	38	51	WAR	23	1.29	P 4	0	AV1	+0.00	F/L
Bobbin	38	56	NQI		21.31	P 1	49	TEH	+16.08	F/L
Bobbin	38	57	ADI		3.24	6	83	08H	+8.50	F/L
U-Bend			VOL		1.24	1	72	08H	+8.45	08H
Bobbin	38	59	WAR	14	0.57	P 4	0	AV2	+0.00	F/L
Bobbin	38	62	NQI		1.92	P 1	56	TEC	+5.30	F/L
Bobbin	38	63	ADI		1.94	6	78	01H	+12.91	F/L
Bobbin			ADI		2.00	6	78	01H	+16.42	F/L
Bobbin			WAR	29	1.88	P 4	0	AV1	+0.00	F/L
Bobbin			WAR	30	2.00	P 4	0	AV2	+0.00	F/L
H/L Special I			VOL		0.50	1	115	01H	+16.42	C2H
H/L Special I			VOL		0.51	1	135	01H	+12.91	02H
Bobbin	38	68	ODI	17	0.46	3	127	22C	+3.13	F/L
C/L Special I			VOL		0.86	1	111	22C	+2.81	22C
Bobbin	38	70	ODI	15	0.91	3	131	11C	+32.93	F/L
C/L Special I			VOL		0.73	1	122	11C	+32.23	11C
Bobbin	38	90	NQI		0.45	3	98	15C	+3.83	F/L
C/L Special I			VOL		0.61	1	112	15C	+3.52	15C
Bobbin	39	20	ADI		1.34	6	57	12C	+12.55	F/L
Bobbin			WAR	12	0.49	P 4	0	AV2	+0.00	F/L
C/L Special I			VOL		0.87	1	110	12C	+12.04	12C
Bobbin	39	22	WAR	14	0.58	P 4	0	AV1	+0.00	F/L
Bobbin			WAR	15	0.69	P 4	0	AV3	+0.00	F/L
Bobbin	39	29	ADI		2.42	6	85	10C	+8.08	F/L
C/L Special I			VOL		0.65	1	104	10C	+8.91	10C
Bobbin	39	33	ADI		3.09	6	77	13C	+16.93	F/L
C/L Special I			VOL		0.74	1	113	12C	-5.79	12C
Bobbin	39	35	WAR	9	0.38	P 4	0	AV2	+0.00	F/L
Bobbin	39	36	WAR	11	0.47	P 4	0	AV3	+0.00	F/L
Bobbin	39	42	ADI		2.26	6	76	14C	+4.34	F/L
C/L Special I			VOL		1.17	1	118	14C	+4.27	14C
Bobbin	39	50	ODI	5	1.86	4	143	13C	+2.29	F/L
Bobbin			WAR	21	1.09	P 4	0	AV1	+0.00	F/L
C/L Special I			VOL		1.32	1	97	13C	+2.21	13C
Bobbin	39	67	NQI		0.52	3	107	06H	+35.45	F/L
H/L Special I			VOL		0.93	1	139	07H	-8.69	07H
Bobbin	39	74	ADI		2.35	6	78	11C	+24.99	F/L
C/L Special I			VOL		1.70	1	148	11C	+25.88	11C
Bobbin	39	80	WAR	14	0.58	P 4	0	AV1	+0.00	F/L
Bobbin	39	90	ODI	5	0.52	3	141	05H	+28.23	F/L
H/L Special I			VOL		0.32	1	36	05H	+27.41	C6H
Bobbin	39	91	NQI		2.89	P 1	161	TEH	+15.06	F/L
Bobbin	39	96	NQI		1.59	3	120	04H	+35.01	F/L
H/L Special I			VOL		0.90	1	107	05H	-9.16	05H
Bobbin	40	21	NQI		0.53	P 1	73	10C	+0.15	F/L
C/L Special I			VOL		0.39	1	160	10C	-0.07	10C
Bobbin	40	29	NQI		0.40	3	101	22C	+14.52	F/L
C/L Tubesheet			VOL		0.67	1	73	TSC	+0.99	TSC
C/L Special I			VOL		0.44	1	91	21C	-6.15	21C

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	40	51	NQI		0.65	3	58	11C	+24.24
Bobbin	40	79	NQI		7.86	3	20	TEH	+13.60
Bobbin			NQI		13.07	P 1	39	TEH	+17.48
H/L Tubesheet			MAI		1.67	1	26	TSH	-4.44
Bobbin	41	38	WAR	15	0.67	P 4	0	AV1	+0.00
Bobbin	41	45	ODI	16	1.93	3	130	21C	+2.03
C/L Special I			VOL		1.44	1	104	21C	+2.10
Bobbin	41	63	NQI		1.87	P 1	67	TEC	+2.00
Bobbin	41	83	WAR	25	0.97	P 4	0	AV1	+0.00
H/L Tubesheet			SAI		1.58	1	26	TSH	-5.02
Bobbin	41	85	ADI		1.84	6	63	06H	+41.00
H/L Special I			VOL		1.60	1	126	07H	-3.21
Bobbin	42	23	WAR	21	1.08	P 4	0	AV3	+0.00
Bobbin	42	30	NQI		0.69	3	138	13C	+18.83
C/L Special I			VOL		1.52	1	102	12C	-4.05
Bobbin	42	31	NQI		0.64	3	127	12C	+5.12
C/L Special I			VOL		0.70	1	108	12C	+5.49
Bobbin	42	34	WAR	10	0.42	P 4	0	AV2	+0.00
Bobbin			WAR	11	0.43	P 4	0	AV4	+0.00
Bobbin			WAR	12	0.52	P 4	0	AV3	+0.00
Bobbin	42	35	WAR	19	0.93	P 4	0	AV1	+0.00
Bobbin	42	36	WAR	10	0.42	P 4	0	AV1	+0.00
Bobbin	42	37	WAR	12	0.48	P 4	0	AV2	+0.00
Bobbin	42	40	WAR	7	0.28	P 4	0	AV1	+0.00
Bobbin	42	43	WAR	24	1.36	P 4	0	AV1	+0.00
Bobbin	42	45	WAR	18	0.87	P 4	0	AV1	+0.00
Bobbin	42	49	ODI	6	2.40	3	137	18C	+5.21
Bobbin			NQI		2.09	P 1	64	TEH	+14.79
C/L Special I			VOL		1.47	1	90	18C	+5.34
Bobbin	42	53	WAR	15	0.66	P 4	0	AV2	+0.00
Bobbin			WAR	21	1.07	P 4	0	AV1	+0.00
U-Bend	42	61	VOL		1.13	1	102	08H	+19.67
Bobbin			ODI	4	1.21	3	139	08H	+19.39
Bobbin	42	62	WAR	6	0.69	P 2	0	17C	+0.00
Bobbin			WAR	10	1.15	P 2	0	16C	+0.00
Bobbin	42	68	WAR	27	1.60	P 4	0	AV1	+0.00
Bobbin	42	71	NQI		4.17	P 1	38	TEH	+11.77
Bobbin	42	73	NQI		18.85	P 1	66	TEH	+17.21
H/L Tubesheet			MAI		11.42	1	33	TSH	-4.26
Bobbin	42	76	WAR	14	0.57	P 4	0	AV1	+0.00
Bobbin	42	86	ADI		2.09	6	91	07H	+28.52
Bobbin			NQI		0.53	3	127	04H	+30.01
H/L Special I			VOL		0.60	1	128	05H	-14.14
H/L Special I			VOL		0.75	1	149	08H	-15.87
Bobbin	43	31	WAR	15	0.66	P 4	0	AV3	+0.00
Bobbin	43	33	NQI		3.51	P 1	33	TEC	+19.06
Bobbin	43	37	ODI	8	0.39	3	137	15C	+18.36
Bobbin			ODI	10	0.22	3	135	13C	+1.90
Bobbin			WAR	5	0.66	P 2	0	17C	-0.28
Bobbin			WAR	15	0.68	P 4	0	AV3	+0.00
C/L Special I			VOL		0.48	1	118	13C	+2.03
C/L Special I			VOL		0.49	1	117	15C	+18.51
Bobbin	43	40	NQI		0.53	3	103	22C	+1.40
C/L Special I			VOL		0.14	1	97	22C	+8.10
C/L Special I			VOL		0.28	1	86	22C	+2.11
Bobbin	43	43	WAR	9	0.37	P 4	0	AV1	+0.00
Bobbin			WAR	16	0.71	P 4	0	AV3	+0.00
Bobbin	43	50	NQI		0.44	P 1	147	11C	-0.09
Bobbin	43	52	WAR	9	0.34	P 4	0	AV1	+0.00
Bobbin			WAR	15	0.66	P 4	0	AV2	+0.00
Bobbin	43	54	WAR	11	0.47	P 4	0	AV1	+0.00
Bobbin	43	55	NQI		0.46	P 1	105	17C	-0.28
Bobbin			WAR	17	0.80	P 4	0	AV1	+0.00
C/L Special I			VOL		1.18	1	136	17C	-0.29
Bobbin	43	58	WAR	13	0.53	P 4	0	AV2	+0.00

to +8.20

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION		EXTENT1
Bobbin	43	62	WAR	25	1.41	P 4	0	AV1	+0.00	F/L
Bobbin	43	63	WAR	19	0.89	P 4	0	AV1	+0.00	F/L
Bobbin	43	65	WAR	28	1.78	P 4	0	AV1	+0.00	F/L
Bobbin	43	67	WAR	22	1.08	P 4	0	AV1	+0.00	F/L
Bobbin	43	68	NQI		1.48	P 1	66	TEH	+19.17	F/L
Bobbin			WAR	24	1.31	P 4	0	AV1	+0.00	F/L
Bobbin	43	70	WAR	19	0.89	P 4	0	AV1	+0.00	F/L
Bobbin	43	71	WAR	29	1.91	P 4	0	AV1	+0.00	F/L
Bobbin	43	76	WAR	16	0.66	P 4	0	AV1	+0.11	F/L
Bobbin	43	86	ADI		1.10	6	77	20C	+14.30	F/L
Bobbin			NQI		12.94	P 1	174	TEH	+14.39	F/L
C/L Special I			VOL		0.58	1	91	18C	-1.40	18C
Bobbin	44	35	ADI		3.95	6	100	22C	+8.40	F/L
Bobbin			ADI		5.25	6	66	22C	+10.51	F/L
Bobbin			ADI		5.32	6	69	18C	+6.04	F/L
Bobbin			ADI		8.06	6	85	22C	+5.50	F/L
C/L Special I			VOL		0.47	1	105	18C	+6.83	18C
C/L Special I			VOL		1.56	1	111	22C	+5.33	21C
C/L Special I			VOL		1.58	1	109	22C	+8.09	21C
C/L Special I			VOL		1.69	1	112	22C	+10.16	21C
Bobbin	44	36	ODI	31	0.91	3	118	10C	+1.63	F/L
Bobbin			NQI		0.43	P 1	126	20C	-0.35	F/L
C/L Special I			VOL		0.45	1	107	20C	-0.29	20C
C/L Special I			VOL		0.58	1	88	10C	+2.12	10C
Bobbin	44	37	ADI		8.09	6	81	17C	+18.17	F/L
C/L Special I			VOL		1.44	1	91	17C	+17.64	15C
Bobbin	44	39	ODI	8	1.55	3	136	11C	+40.96	F/L
C/L Special I			VOL		0.43	1	108	10C	-2.96	10C
Bobbin	44	41	ODI	6	1.23	3	137	11C	-1.68	F/L
C/L Special I			VOL		0.46	1	101	11C	-1.53	11C
Bobbin	44	46	WAR	33	2.77	P 4	0	AV1	+0.00	F/L
Bobbin	44	51	WAR	8	1.13	P 2	0	17C	+0.00	F/L
Bobbin			WAR	23	1.25	P 4	0	AV1	+0.00	F/L
Bobbin	44	52	WAR	20	1.03	P 4	0	AV1	+0.00	F/L
Bobbin	44	54	WAR	26	1.56	P 4	0	AV1	+0.00	F/L
Bobbin	44	57	WAR	8	1.07	P 2	0	17C	+0.00	F/L
Bobbin	44	62	WAR	21	1.11	P 4	0	AV1	+0.00	F/L
Bobbin	44	63	ODI	9	0.64	3	136	07H	+6.22	F/L
H/L Special I			VOL		0.70	1	91	07H	+16.89	07H
H/L Special I			VOL		0.92	1	97	07H	+15.25	07H
H/L Special I			VOL		1.18	1	86	07H	+6.54	07H
Bobbin	44	71	WAR	12	0.53	P 4	0	AV1	+0.00	F/L
Bobbin	44	72	ADI		0.98	6	75	07H	+26.57	F/L
H/L Special I			VOL		0.43	1	131	07H	+26.37	07H
H/L Special I			VOL		0.64	1	151	07H	+28.88	07H
Bobbin	44	74	ADI		2.31	6	76	04H	+17.37	F/L
H/L Special I			VOL		1.17	1	164	04H	+17.23	04H
Bobbin	44	84	ADI		1.31	6	73	TSH	+6.84	F/L
Bobbin			ADI		3.79	6	89	01H	+7.01	F/L
H/L Tubesheet			SCI		0.35	1	13	TSH	-0.04	TSH
H/L Special I			VOL		0.24	1	76	TSH	+6.42	01H
H/L Special I			VOL		0.83	1	166	01H	+6.82	01H
Bobbin	44	91	ADI		1.60	6	70	02H	+8.85	to +12.34
H/L Special I			VOL		0.82	1	125	02H	+9.74	to +13.84
Bobbin	45	47	WAR	7	0.29	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	17	0.76	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	21	1.07	P 4	0	AV1	+0.00	F/L
Bobbin	45	54	WAR	12	0.48	P 4	0	AV3	+0.00	F/L
Bobbin			WAR	17	0.81	P 4	0	AV2	+0.00	F/L
Bobbin			WAR	24	1.35	P 4	0	AV1	+0.00	F/L
Bobbin	45	60	WAR	8	1.03	P 2	0	16C	+0.00	F/L
Bobbin	45	62	WAR	10	1.21	P 2	0	17C	+0.00	F/L
Bobbin	45	64	WAR	5	0.61	P 2	0	16C	+0.00	F/L
Bobbin			WAR	8	1.00	P 2	0	17C	+0.00	F/L
Bobbin	45	68	WAR	19	0.93	P 4	0	AV3	+0.00	F/L



## ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

## INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	45	75	WAR	14	0.61	P 4	0	AV1	+0.00
Bobbin	45	86	NQI		12.57	1	18	TEH	+12.38
Bobbin	45	89	ADI		3.69	6	73	13C	+5.12
C/L Special I			VOL		1.43	1	114	13C	+5.10
Bobbin	45	90	ADI		1.60	6	60	11C	+14.83
C/L Special I			VOL		0.78	1	119	11C	+15.48
Bobbin	46	26	ODI	6	1.48	3	128	07H	+1.76
H/L Special I			VOL		0.81	1	28	07H	+1.62
Bobbin	46	59	ODI	7	0.74	3	138	07H	+39.49
Bobbin			WAR	8	0.97	P 2	0	18C	+0.00
Bobbin	46	62	ODI	7	0.70	3	138	12C	+3.95
Bobbin	46	63	WAR	21	1.06	P 4	0	AV1	+0.00
Bobbin	46	72	WAR	26	1.64	P 4	0	AV1	+0.00
Bobbin	46	74	WAR	13	0.58	P 4	0	AV1	+0.00
Bobbin	46	76	NQI		0.47	3	68	05H	+27.85
H/L Special I			VOL		0.79	1	148	05H	+28.66
Bobbin	47	39	WAR	13	1.87	P 2	0	18C	+0.00
Bobbin	47	40	WAR	8	1.09	P 2	0	18C	+0.00
Bobbin	47	50	WAR	14	1.94	P 2	0	17C	+0.00
Bobbin	47	51	WAR	13	1.87	P 2	0	17C	+0.00
Bobbin	47	55	WAR	7	0.95	P 2	0	15C	+0.00
Bobbin	47	61	WAR	6	0.80	P 2	0	17C	+0.00
Bobbin	47	62	WAR	12	1.61	P 2	0	17C	+0.00
Bobbin	47	67	ODI	5	2.76	3	140	11C	+22.91
C/L Special I			VOL		1.83	1	122	11C	+23.37
Bobbin	47	68	NQI		0.53	P 1	55	16C	-0.13
C/L Special I			VOL		0.32	P 1	138	16C	+0.00
Bobbin	47	74	WAR	20	1.03	P 4	0	AV1	+0.00
Bobbin	47	79	NQI		18.51	P 1	17	TEH	+14.59
Bobbin	48	35	WAR	5	0.67	P 2	0	17C	+0.00
Bobbin	48	36	WAR	9	1.14	P 2	0	18C	+0.00
Bobbin	48	38	WAR	8	1.12	P 2	0	20C	+0.00
Bobbin	48	40	WAR	7	0.96	P 2	0	20C	+0.00
Bobbin			WAR	20	3.02	P 2	0	18C	+0.00
Bobbin	48	41	WAR	3	0.35	P 2	0	18C	+0.00
Bobbin	48	46	WAR	9	1.25	P 2	0	20C	+0.00
Bobbin	48	47	NQI		4.33	P 1	43	TEH	+13.31
Bobbin	48	48	ADI		2.03	6	77	12C	+8.94
Bobbin			WAR	3	0.36	P 2	0	20C	+0.00
Bobbin			WAR	8	1.01	P 2	0	18C	+0.00
C/L Special I			VOL		0.57	1	119	12C	+9.31
Bobbin	48	50	WAR	5	0.66	P 2	0	17C	+0.00
Bobbin			WAR	8	1.04	P 2	0	18C	+0.00
Bobbin	48	56	WAR	13	1.74	P 2	0	17C	+0.00
Bobbin	48	57	WAR	5	0.69	P 2	0	15C	+0.00
Bobbin	48	60	NQI		0.56	P 1	98	13C	+0.42
Bobbin			WAR	11	1.43	P 2	0	15C	+0.00
C/L Special I			VOL		0.49	1	145	13C	+0.41
Bobbin	48	62	WAR	6	0.76	P 2	0	13C	+0.00
Bobbin			WAR	21	3.02	P 2	0	17C	+0.00
Bobbin			WAR	31	2.34	P 4	0	AV1	+0.00
Bobbin	48	64	WAR	8	1.07	P 2	0	18C	+0.00
Bobbin			WAR	17	2.39	P 2	0	17C	+0.00
Bobbin	48	65	WAR	9	1.19	P 2	0	15C	+0.00
Bobbin	48	71	WAR	11	1.37	P 2	0	16C	+0.00
Bobbin	48	72	WAR	7	0.84	P 2	0	17C	+0.00
Bobbin	48	78	WAR	9	0.62	P 2	0	20C	+0.00
Bobbin	49	51	WAR	5	0.70	P 2	0	17C	+0.00
Bobbin	49	54	ADI		0.69	3	98	11C	+36.60
C/L Special I			VOL		1.39	1	127	10C	-7.27
Bobbin	49	55	WAR	5	0.62	P 2	0	17C	+0.00
Bobbin	49	56	WAR	6	0.81	P 2	0	17C	+0.00
Bobbin			WAR	7	0.91	P 2	0	15C	+0.00
Bobbin	49	57	WAR	8	1.04	P 2	0	15C	+0.00
Bobbin	49	58	WAR	11	1.38	P 2	0	18C	+0.00

ATTACHMENT #8 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

TEST TYPE	ROW	COL	IND	%TW	VOLTS	CHN	DEG	LOCATION	EXTENT1
Bobbin	49	60	WAR	5	0.61	P 2	0	17C	+0.00
Bobbin			WAR	10	1.24	P 2	0	15C	+0.00
Bobbin	49	61	WAR	10	1.21	P 2	0	15C	+0.00
Bobbin	49	62	ADI		3.00	6	84	AV1	+16.00
U-Bend			VOL		0.92	1	104	AV1	+15.50
Bobbin			WAR	6	0.71	P 2	0	20C	+0.00
Bobbin			WAR	7	0.85	P 2	0	15C	+0.00
Bobbin	49	63	WAR	15	1.93	P 2	0	17C	+0.00
Bobbin	49	68	WAR	12	1.41	P 2	0	17C	+0.00

Total Indications Found = 984

Total Tubes Found = 518

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FTI TUBAN II (Version 2.3) 05/13/1996 13:41:13  
McGuire Nuclear Station - Unit Two  
S/G A  
04/96 RFO

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Page 1

ATTACHMENT #9 - TUBES PLUGGED 4/96 RFO

COUNT ROW COL

COUNT ROW COL

1.	2	75
2.	2	76
3.	3	16
4.	4	4
5.	4	59
6.	4	83
7.	4	84
8.	4	106
9.	5	57
10.	8	34
11.	8	59
12.	8	67
13.	10	67
14.	12	36
15.	13	8
16.	13	12
17.	13	19
18.	14	5
19.	15	45
20.	16	4
21.	16	35
22.	16	96
23.	18	18
24.	18	19
25.	19	68
26.	21	48
27.	27	98
28.	29	86
29.	30	28
30.	30	73
31.	31	70
32.	32	35
33.	33	65
34.	36	49
35.	36	67
36.	37	52
37.	38	83
38.	40	89
39.	40	96
40.	41	47
41.	44	73
42.	46	67

Total Data Items Found = 42  
Total Tubes Found = 42

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FTI TUBAN II (Version 2.3)

05/13/1996 13:42:39

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McGuire Nuclear Station - Unit Two

S/G B

04/96 RFO

Page 1

ATTACHMENT #10 - TUBES PLUGGED 4/96 RFO

COUNT ROW COL

COUNT ROW COL

1. 2 55  
2. 2 56  
3. 2 63  
4. 2 68  
5. 2 70  
6. 3 12  
7. 3 63  
8. 4 64  
9. 4 67  
10. 4 73  
11. 4 84  
12. 5 71  
13. 5 106  
14. 6 63  
15. 6 64  
16. 7 83  
17. 8 59  
18. 8 75  
19. 10 65  
20. 10 68  
21. 10 74  
22. 11 12  
23. 11 59  
24. 11 68  
25. 12 15  
26. 12 40  
27. 12 69  
28. 12 96  
29. 13 72  
30. 15 64  
31. 15 96  
32. 15 110  
33. 16 20  
34. 16 83  
35. 17 15  
36. 19 52  
37. 20 6  
38. 20 24  
39. 25 68  
40. 25 72  
41. 25 80  
42. 26 59  
43. 27 86  
44. 27 107  
45. 28 69  
46. 30 57

47. 33 30  
48. 41 53  
49. 47 45  
50. 48 57  
51. 49 41

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FTI TUBAN II (Version 2.3) 05/13/1996 16:26:38  
McGuire Nuclear Station - Unit Two  
S/G C  
04/96 RFO

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Page 1

ATTACHMENT #11 - TUBES PLUGGED 4/96 RFO

COUNT ROW COL

COUNT ROW COL

1.	2	12
2.	2	21
3.	2	114
4.	5	64
5.	5	100
6.	5	105
7.	5	106
8.	7	7
9.	7	85
10.	8	100
11.	8	106
12.	10	52
13.	10	99
14.	11	7
15.	11	77
16.	12	78
17.	12	81
18.	14	49
19.	17	102
20.	18	76
21.	20	60
22.	20	61
23.	21	5
24.	23	7
25.	31	29
26.	31	32
27.	37	38
28.	37	98
29.	40	35
30.	41	86
31.	43	41
32.	49	84

Total Data Items Found = 32

Total Tubes Found = 32

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ATTACHMENT #12 - TUBES PLUGGED 4/96 RFO  
COUNT ROW COL

	COUNT	ROW	COL	COUNT	ROW	COL
1.	2	61		47.	24	87
2.	2	99		48.	27	91
3.	2	100		49.	28	100
4.	2	101		50.	29	102
5.	2	114		51.	29	105
6.	3	65		52.	31	20
7.	3	85		53.	43	86
8.	3	86		54.	44	84
9.	3	88		55.	46	26
10.	3	105				
11.	4	15				
12.	4	105				
13.	4	110				
14.	5	68				
15.	5	87				
16.	5	88				
17.	5	98				
18.	5	105				
19.	5	106				
20.	5	108				
21.	6	34				
22.	6	84				
23.	6	85				
24.	6	109				
25.	7	22				
26.	7	36				
27.	7	43				
28.	8	11				
29.	8	32				
30.	8	43				
31.	8	62				
32.	8	110				
33.	9	111				
34.	10	106				
35.	11	87				
36.	12	68				
37.	13	7				
38.	14	107				
39.	15	108				
40.	17	84				
41.	18	78				
42.	18	104				
43.	19	41				
44.	21	86				
45.	23	46				
46.	23	66				