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January 31, 1955

### TRIP REPORT

To: Lansdale Tube Company  
Jan. 25 - Jan. 27, 1955

Subject: To investigate the Apple test and test equipment

Personnel Contacted: H. Colgate  
G. Pratt  
R. Stoffer

### Aging and Re-aging

Lansdale factory aging and re-aging schedules are given in the separate sheet entitled "Apple Aging and Re-aging Schedules".

### Testing

Entire Lansdale factory testing process was investigated including index stripe measurement. The writer was interested especially in their skew measurement. Lansdale factory testing specifications are shown on the attached sheet titled "apple Test Specification".

### Test Equipment

Our DC test equipment and index measurement equipment will operate satisfactorily for the above test specification provided that Textronix 535 and auxiliary circuit will be used.

### Test Results on G.E. Apple Tubes

Two General Electric Apple tubes were tested.

Tube A24C3A had excessive arcing. It was seen that there was white powder, looked like MgO, around the stem lead of the tube. Because of excessive arcing, this tube was not tested.

Tube A24C2A also had arcing. However, the following data was obtained:

H. V. Breakdown	arcing
H. V. Breakdown (anodes to all)	arcing
H. V. Breakdown (screen to all)	arcing
Convergence	46.5 mm (under cov.)
	50

Grid Orientation (focused)	-90
Skew	1.5
Grid to Grid Leakage	.2 $\mu$ a
Grid 2 - all leakage	3.8 $\mu$ a

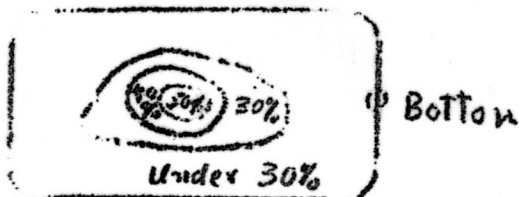
	<u>Beam A</u>	<u>Beam B</u>
Cutoff	45V	50V
0 bias current	190 $\mu$ a	190 $\mu$ a
Cathode Activity	25% 20%	20% 25%
G <sub>1</sub> - K leakage	0	.2 $\mu$ a
Spot Size	30 mm	30 mm

### Screen Quality

There was several imprinted spots on the center part of the screen. Also, tiny blue phosphor particles were on green phosphor stripe, i.e., contaminated.

### Index Measurement

Because of excessive arcing, it was difficult to measure accurate value. The following is the approximate measured yield value of MgO.



C. S. Kim

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Color Design Engineering  
CATHODE-RAY TUBE SUB-DEPT.

/fmd

Apple Aging Schedule (Lansdale Factory)

Time (min.)	$E_F(V)$	$I_{cl}(ma)$	$E_{cl}(V)$	$E_{c2}(V)$	$E_b(KV)$	$I_b(ma)$
1	6.					
3	12					
1	8					
30 (Beg.)	8	5	Record	100	3	Record
(End.)	8	5	Record	100	3	Record
1	6.5		0	100	3	
30 (Beg.)	6.5		0	500	3	Record
(End.)			0	500	3	Record

Apple Reaging Schedule (Lansdale Factory)

Time (min.)	$E_F(V)$	$I_{cl}(ma)$	$E_{cl}(V)$	$E_{c2}(V)$	$E_b(KV)$	$I_b(ma)$
1	6					
5	8					
5	10.					
1	12.5					
1	8					
15 (Beg.)	8	5	Record	100	3	Record
(End.)	8	5	Record	100	3	Record
1	6.5		0	100	3	
45 (Beg.)	6.5		0	500	3	Record
(End.)	6.5		0	500	3	Record

## Apple Test Specifications (Lansdale Factory)

[illegible]