

Trip Report

Dist: L. C. Maiers
J. C. Nonnekens
E. F. Schilling
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DEC 21 1954
G. E. TEST ENGINEERING
NOTE FILE DISCUSS
ANSWER RETURN LOG

To: Corning Glass Works
Personnel
Contacted: John Cooledge
John Fraser
Malcolm Hunt
Willis Linn
Jack McCartney
Dr. John Sheldon

Purpose: Test and discuss 22" G.E. color bulbs
Discuss current problems of 21" color bulbs

A 22" screen assembly was taken for testing purposes. This was an aluminized phosphor plate and a frame with the accompanying hardware. Testing had been setup to run 5 tubes through exhaust cycle and then pressure test each tube to destruction.

One tube had been exhausted and was ready for the pressure test and the dummy screen assembly was placed in the second tube before exhaust. The aluminized phosphor plate cracked during this test. Number 3 tube was exhausted with the frame in place. The results were as follows:

Tube		Deg. C rise per min.	Hold at 400°C	Deg. C down per min.	PSI at failure
1	Empty	15	30	7.5	54
2	Frame & glass	7	30	3.5	49.5
3	Frame	10	30	5	60.5
4	Empty	15	30	7.5	62
5	Empty	15	30	7.5	59.5

Ave. psi (absolute) 57.1

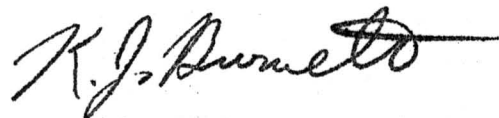
All five failures occurred in the face panels.

A metal plate was cut and attached to the frame to make the weight equal to our screen assembly (12 pounds). This was conventionally mounted in a bulb for drop test.

The tube was evacuated to 27" mercury and dropped face down, in a carton, from a height of 3 feet. When the tube was opened it was found that the screen assembly had slid $5/32$ " on two studs and approximately $1/64$ " on the other two studs. One drop was all that was tried because from past experience Corning personnel considers that dropping the tube face down is the most severe test.

Since Corning has had trouble spinning the 22" funnel, they have asked that we consider changing the plug gage if the beam clearance is sufficient.

From Corning's observations they feel that the 21" breakage can be cut to a minimum by selection. Our remaining 21" orders will be filled on this basis.



K. J. Burnett
Color Design Engineering

/fnd
Ext. 2347