



October 12, 1987

Gentlemen:

This letter is being addressed to all manufacturers and suppliers of electron tubes to enlist their aid in supplying information regarding the shelf life of their products.

The background for this request is as follows: At the meeting on Electron Tube Standardization Planning held in May 1987 at DESC, Dayton, Ohio, Mr. James Nessler gave a presentation on The Diminishing Manufacturing Sources Program. During the presentation, examples of "multi-year procurement" and "large quantity last buy" were mentioned as ways in which DESC tries to offset the effects of diminishing manufacturing sources. This led to a long discussion on the shelf life of electron tubes. The end result of this discussion was summarized by Mr. Art Hudson as follows: "Depending on the tube design, shelf life can be as short as two years and as long as indefinite. No one would commit to giving some guidelines but the Air Force needs the information. It was also noted that some tubes will fail if they have been on the shelf for years and then are put into an active circuit and turned on with full voltages applied. There are techniques, however, that can be used to prevent such failures such as "cooking" the cathode to drive out absorbed gasses before high voltage is applied."

As the Chairman of the Electronic Industries Association JT-16 Committee on Government Specifications and Standards, I accepted the responsibility of conducting a survey of tube manufacturers on all categories of electron tubes. The results of the survey will be categorized by tube family and forwarded to Mr. Nessler and Mr. Hudson at DESC.

Rather than supply a formal survey card, I have listed a few areas of consideration to stimulate your thoughts on the subject of shelf life. I will leave it to your best judgment to provide information that you believe will be most helpful to the Services in providing them with some guidelines on the subject of shelf life.

Areas of Consideration

1. Type of Device: CRT, Magnetron, TWT, Power or Transmitting, etc.
2. Shelf Life (months or years) - without operation or application of voltages.
3. Shelf Life (months or years) - with dynamic operation or application of voltages only.
4. If dynamic operation or application of voltages is required or recommended, specify the required or recommended (state which) procedure to be followed. Can alternates be used? For example, if the tube or device cannot be operated in the actual or similar equipment under dynamic operations, can a DC test or heater only operation be used. Specify procedure and time of test.
5. Is the shelf life specified based on engineering tests, limited field data or best engineering judgment?
6. If you manufacture more than one type or family of electron tubes, we are interested in having your response to the above questions for the second family of devices.

While we have not imposed a time limit on completing this survey, we hope that you will make an effort to provide a response within the next three months. All information is to be sent to:

BURLE INDUSTRIES, INC.
1000 New Holland Avenue
Lancaster, PA 17601-5688
Attn: Mr. Jerome J. Free

Respectfully,



Jerome J. Free
Chairman, JT-16 Committee

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cc: JT-16 Committee Members