

July 23, 1940

Dr. R. M. Bowie
Hygrade Sylvania Corp.
Emporium, Pa.

Dear Bowie:

In connection with the computing machine which I am building, I need 30 or more gaseous discharge tubes with grid control of the thyrotron tube. These tubes will be required to carry something like 300 m. peak current and with forward and inverse peak voltages of between 2500 and 3000 volts. I believe that having tubes of this voltage, the gas will need to be mercury vapor. It will be necessary for these tube to have a dionization bias up about 1/1000 sec. We can conveniently supply any negative bias up to 50 volts to block the tube until the discharge is desired at which time this bias will be removed.

I, of course, have information on the thyrotrons manufactured by G. E. but the plate current and filament current rating of these tubes are too large to make them satisfactory for my purpose. Do you know of any tubes manufactured that will more nearly fill my needs? In the event that the answer to this question is "no", would there be any possibility of having a small batch of tubes manufactured to fill our needs?

We are having, as is to be expected, a very warm spell in the "Tall Corn State". I have not been on the staff this summer but have been working as much (or more) as if I were connected with an industrial organization.

Can we expect a visit from you still or is the real estate business too heavy to permit your absence?

With very best wishes to you and Mrs. Bowie, I am,
Very

Very sincerely yours

J. V. Atanasoff
Assoc. Prof. of Physics and
Mathematics

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