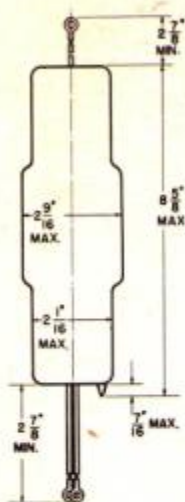


WESTINGHOUSE  **X-RAY TUBES**

OIL-INSULATED VALVE TUBE
TYPE WL-391



Rating Data₁

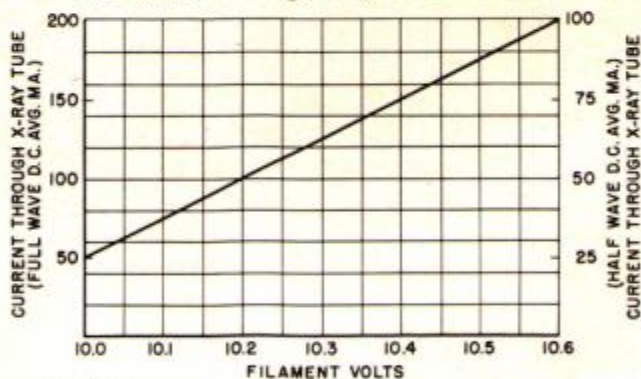
- A. Continuous Duty-
 - Maximum Continuous Rating 50MA
 - Maximum Continuous Inverse Voltage 110KVP
 - Across Valve
- B. Intermittent Rating₂
 - Maximum Intermittent Rating 200MA
 - Maximum Intermittent Inverse Voltage 110KVP
 - Across Valve



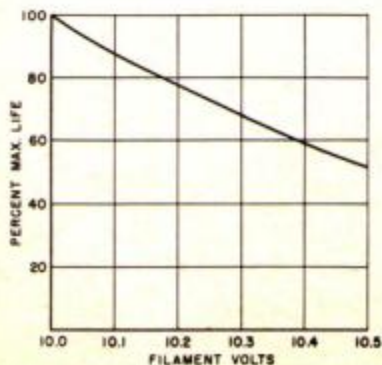
Note 1. These ratings apply to full-wave circuits only and refer to the milliamperes as read on a d.c. average milliammeter in series with the X-Ray tube.

Note 2. Intermittent ratings apply to usual radiographic exposure times.

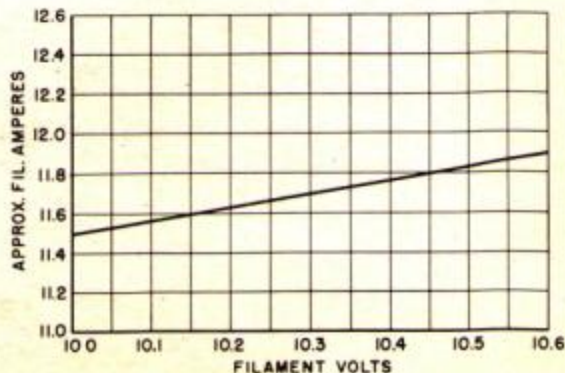
Filament Voltage Adjustment Chart



Relative Filament Life as Function of Filament Volts



Filament Characteristics



Inverse Voltage Rating:

It is important that the inverse voltage of the circuit does not exceed the published maximum rating of the valve tube. Voltages in excess of the published maximum may cause instability, flash-over or puncture. To insure dependable stable operation at rated voltage, each tube is carefully seasoned and tested at voltages in excess of the rating.

Load Current Rating:

Load rating values are supplied on Page 1 of this bulletin and are based on full-wave circuit output. The use of any other circuit requires a correction of the current rating so that the peak values of current produced will not exceed the peak values obtained from the published full-wave ratings.

Filament Adjustments:

The life of a valve tube is governed to a great extent by the operating temperature of the filament. A chart showing relative life expectancy vs. filament voltage is published on Page 1. In order to obtain long life, the practice of energizing the filaments just before the radiographic exposure, and turning them off immediately thereafter, should be followed.

The importance of setting the filament voltage in accordance with the Filament Voltage Adjustment Chart cannot be overestimated. Low filament voltage will result in low emission from the filament and a high forward voltage drop which may be deleterious to the operation of the tube. On the other hand, an excessive filament voltage will result in short filament life.

The Filament Voltage Adjustment Chart is based on the use of full-wave circuits. For other circuits, the filament voltage must be adjusted so that the peak values of current produced will correspond exactly with the peak values of current calculated from this chart.

Installation:

The WL-391 valve tube may be operated in any position. Adequate clearance must be maintained around the tube when it is installed in order to prevent sparking to other objects. The insulating oil should have a dielectric strength of at least 25,000 volts per 0.1 inch.

Fluctuations in supply line voltage should be checked and the filament voltage set at a value high enough to avoid the possibility of the filament voltage dropping below the value indicated on the Filament Voltage Adjustment Chart.