Transmitting Valve

TYPE C.A.T.9

(Cooled Anode)

3695

(*Approximate overall dimensions :* 800 × 200 *m/m.*)

A cooled anode valve suitable for use as a high frequency amplifier in long or short wave circuits on telegraph or telephone transmitters.

The anode forms part of the valve envelope and is designed for cooling by water circulated in direct contact with the anode. At the rated anode dissipation the flow of water should not be less than 4.5 gallons per minute.

Air cooling of the filament leads in the foot tube is essential.

When used in a suitable circuit under oscillating conditions on a long wave telegraphic load, the maximum input is 2.0 amperes mean anode current at 15,000 volts D.C.

In short wave circuits the anode voltage should be reduced and at a wavelength of 15 metres the maximum anode voltage is 9,000 volts D.C.

On a long wave telephonic load using anode voltage modulation, the input should not exceed 1.25 amperes at 12,000 anode volts D.C.

When used as an amplifier of modulated high frequency currents the diss pation per valve anode should not exceed 18 kw., and at wavelengths above 300 metres the maximum anode voltage is 15,000 volts D.C. ; at lower wavelengths the permissible anode voltage is reduced.

Marked Volts. Individual valves are marked with the filament voltage which gives 12 amperes emission current at 90% saturation.

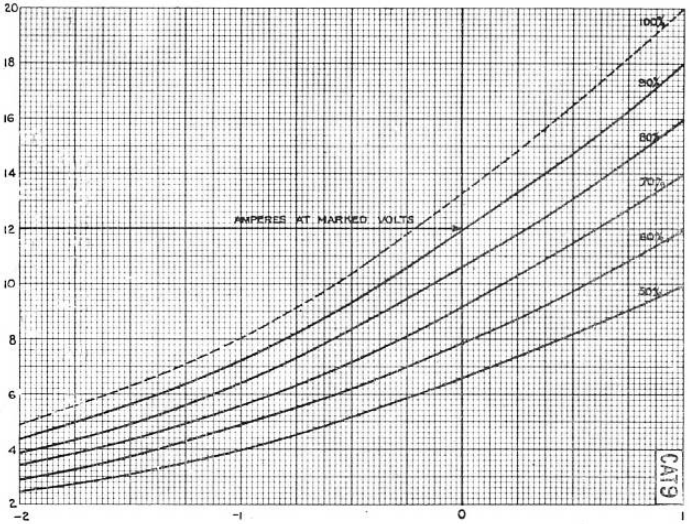
Approximate Data :

Filament volts	18—20	Emission amperes at 90% saturation	12
Filament current (amps.) ...	100	*Amplification factor ...	45
Anode volts	9,000—15,000	*Impedance (ohms)	4,500

* *Taken about anode volts* 15,000 *and grid volts* 0.

Code Word : IWCOT

Variation of emission with filament volts as related to marked filament volts for various degrees of saturation of emission current.

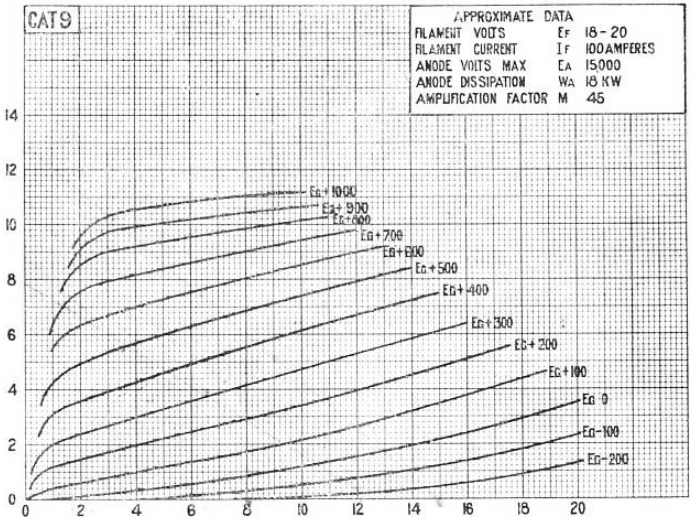


Emission in amperes.

3696

Marked volts to be decreased by above amount.

Marked volts to be increased by above amount.

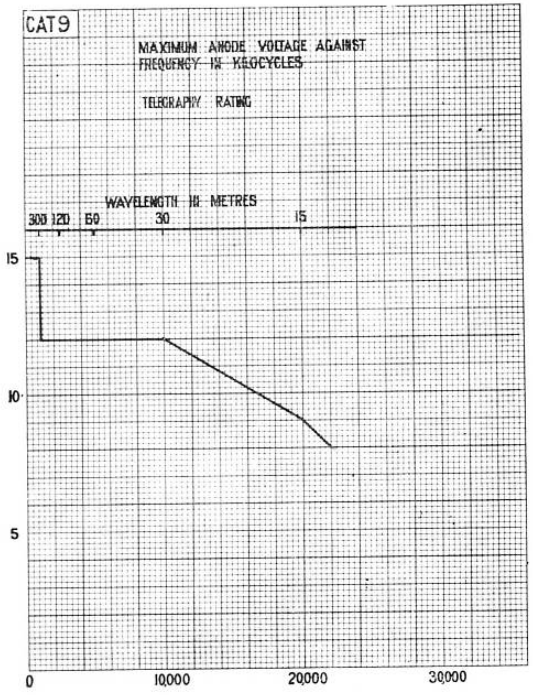


Anode current in amperes.

3697

Anode potential in kilovolts.

Taken at filament volts to give 12 amperes emission at 90 per cent. saturation.



Anode kilovolts D.C.

3698

Frequency in kilocycles.

Characteristic Curves of Average Valve.

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