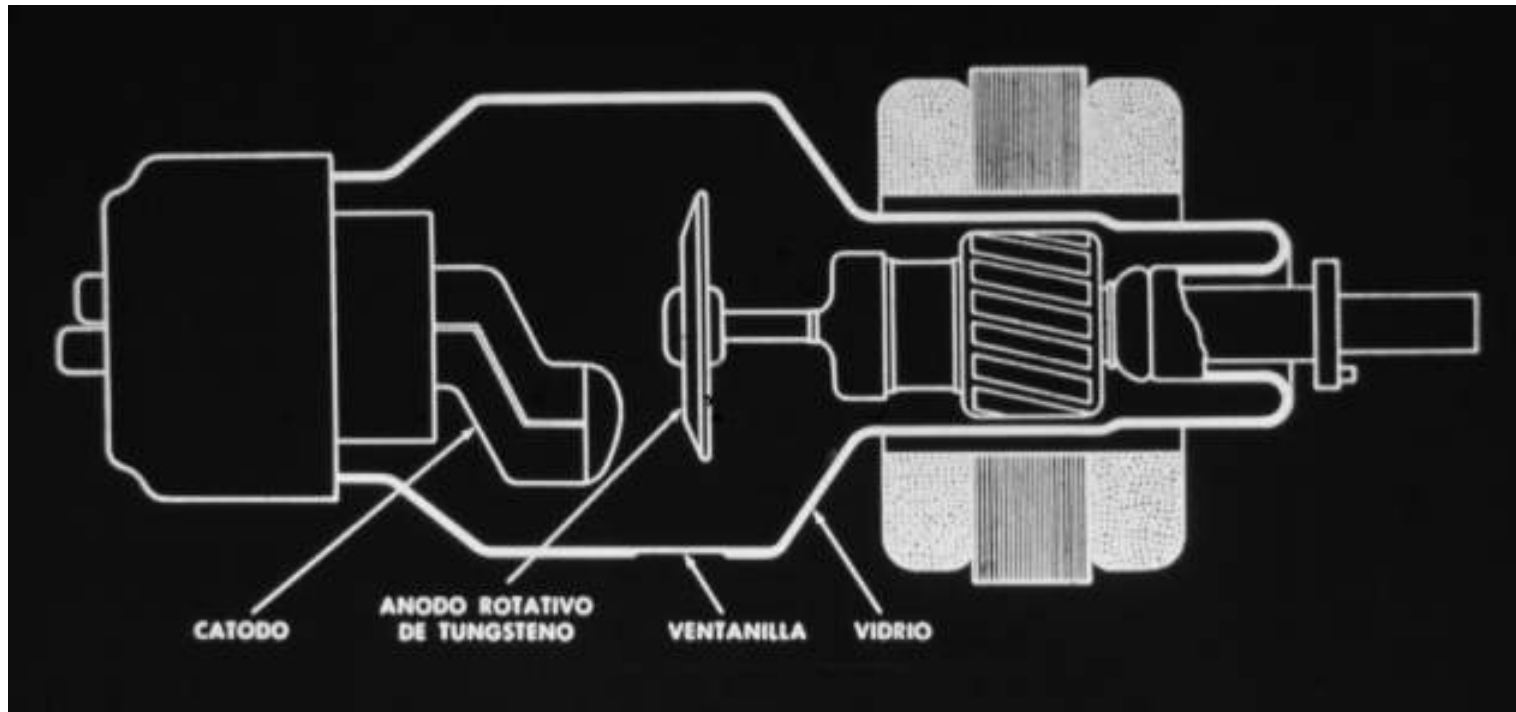
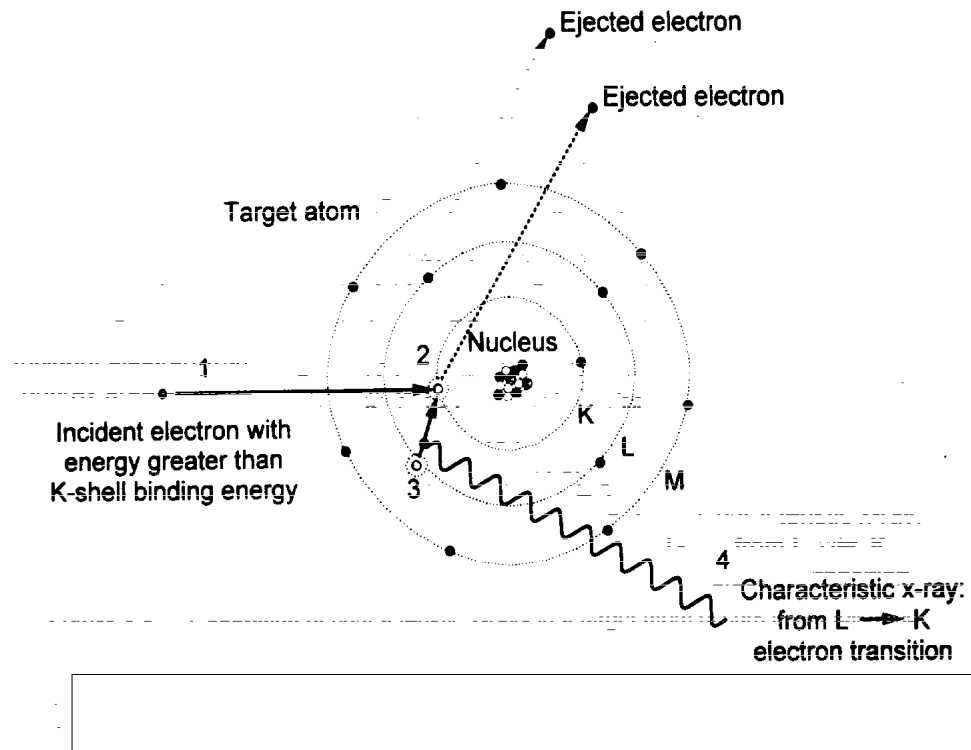


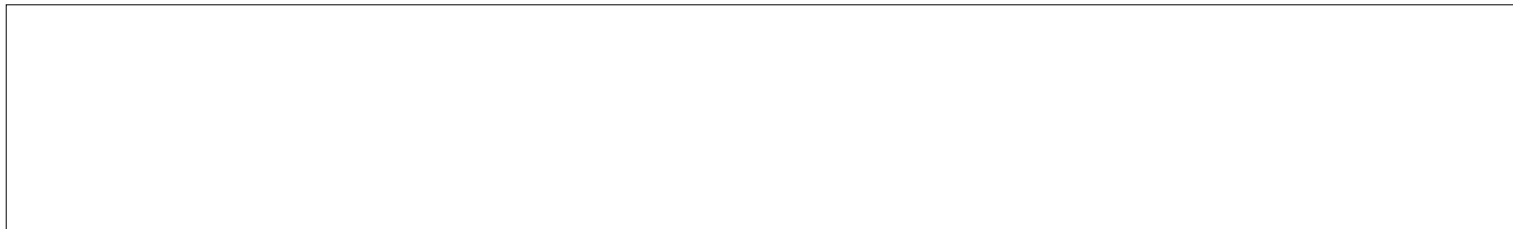
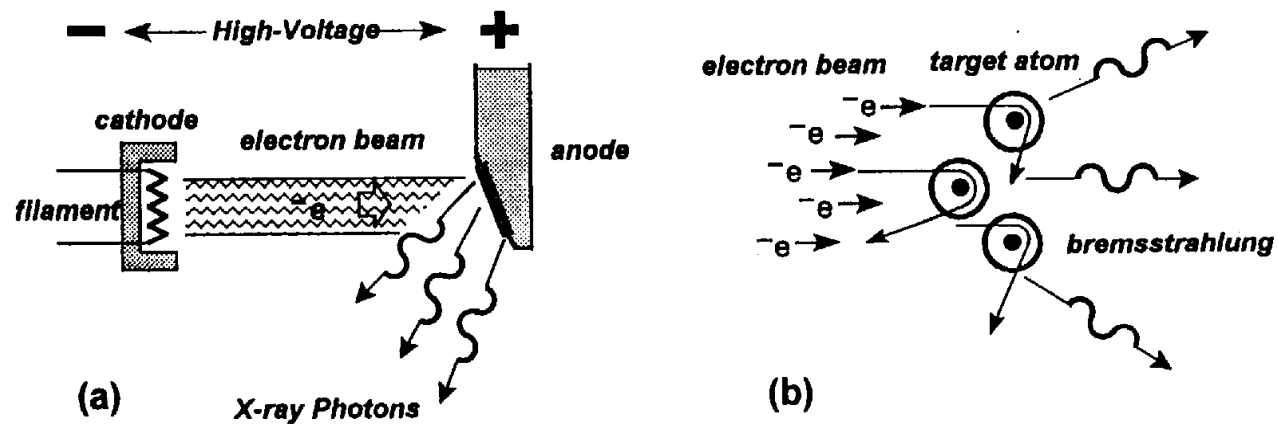
# Ampola de raios X



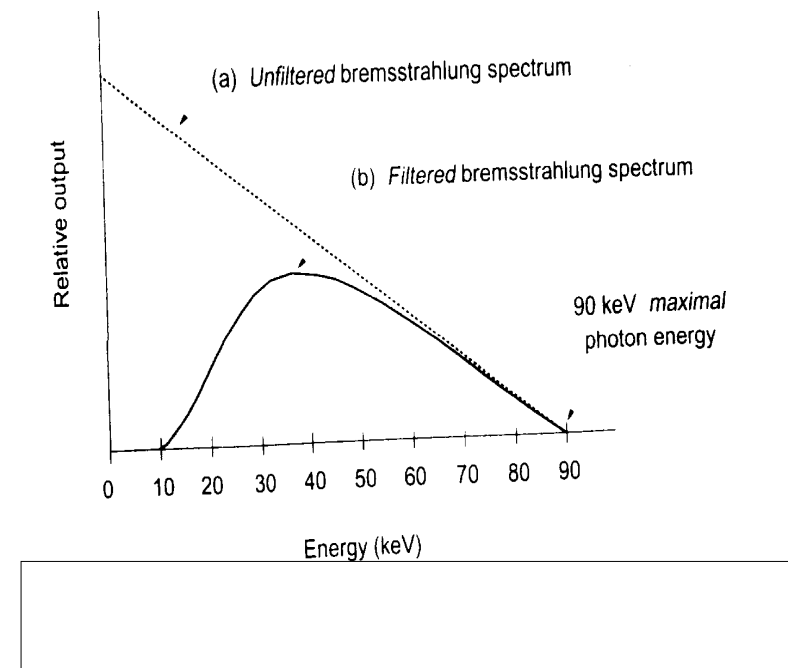
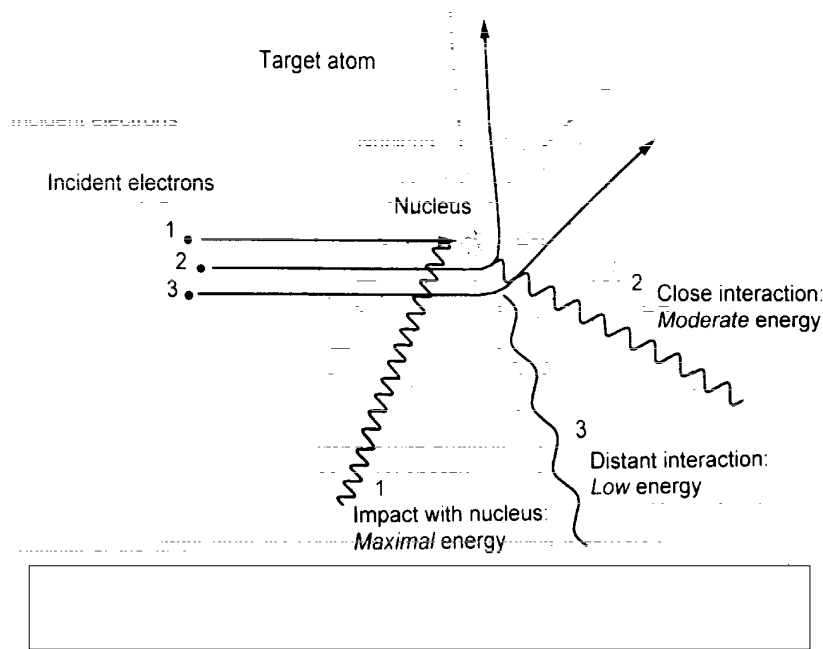
# Produção de raios X Característico



# Produção de raios X por Efeito Bremsstrahlung



# Distribuição da Energia dos raios X Bremsstrahlung



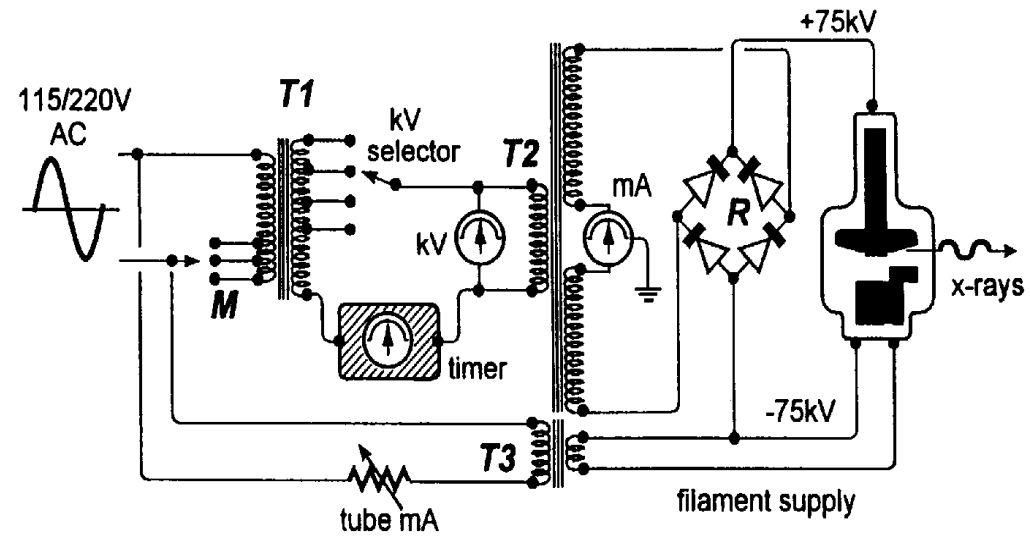
# Geradores de raios X

- **Monofásico**
- **Trifásico**
- **Multipulso de alta frequência**

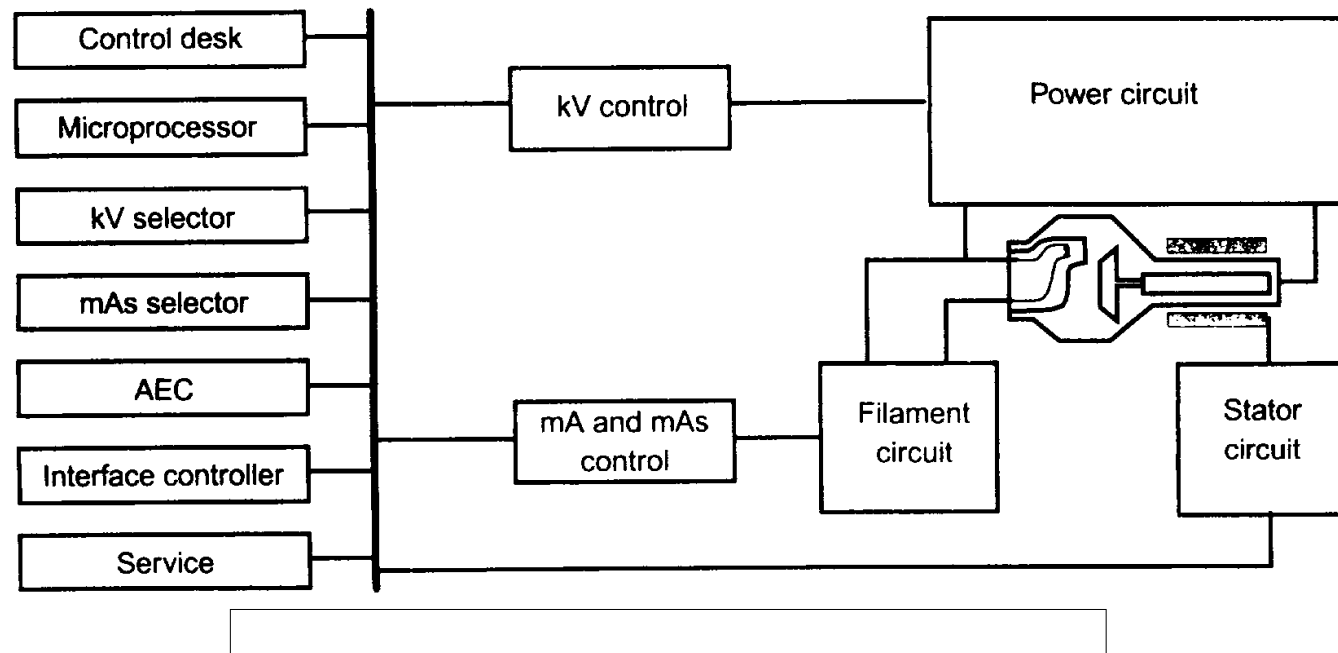
## **Vantagens do gerador de alta frequência**

- **instalação elétrica simplificada**
- **mínima variação de voltagem (2%)**
- **maior eficiência de produção e energia efetiva mais alta**
- **tempo de resposta rápido e reprodutível**
- **fácil calibração**
- **estabilidade**
- **compacto**

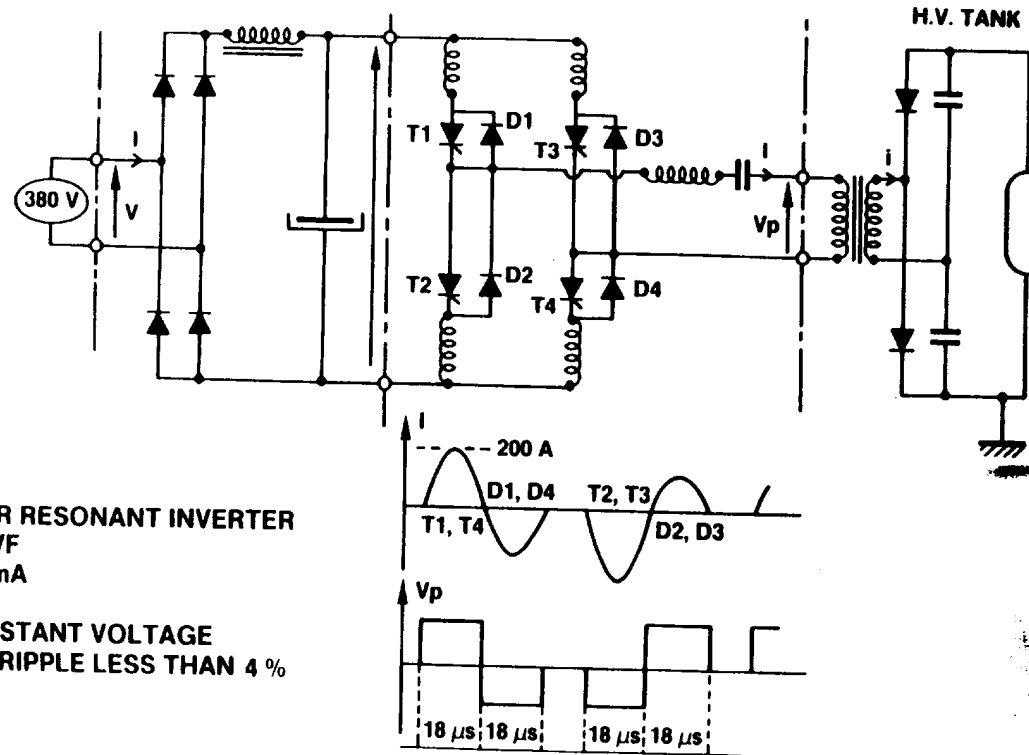
# Componentes Básicos de um Gerador Convencional



# Diagrama de Blocos dos Componentes do Gerador de raios X








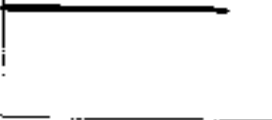
# Gerador de raios X de Alta Frequencia



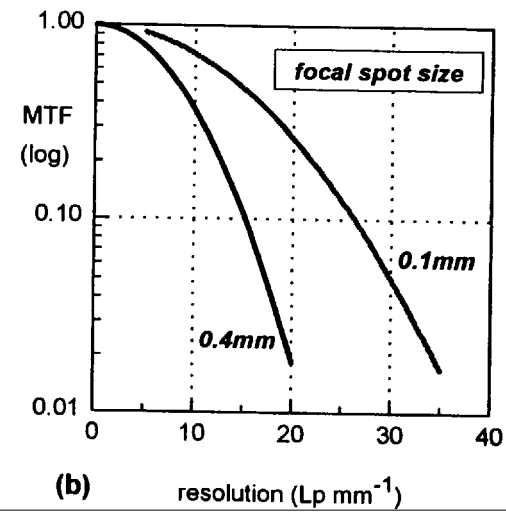
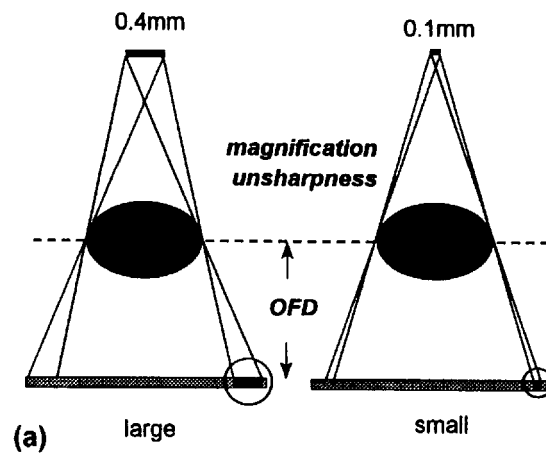
- ASCR RESONANT INVERTER
- 49 kVf
- 200 mA
- 6 kW
- CONSTANT VOLTAGE  
KVP RIPPLE LESS THAN 4 %



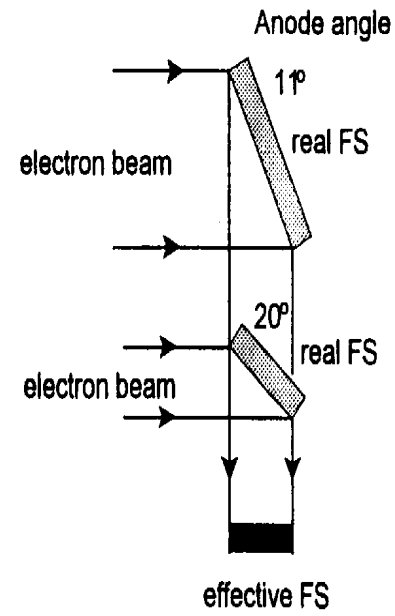
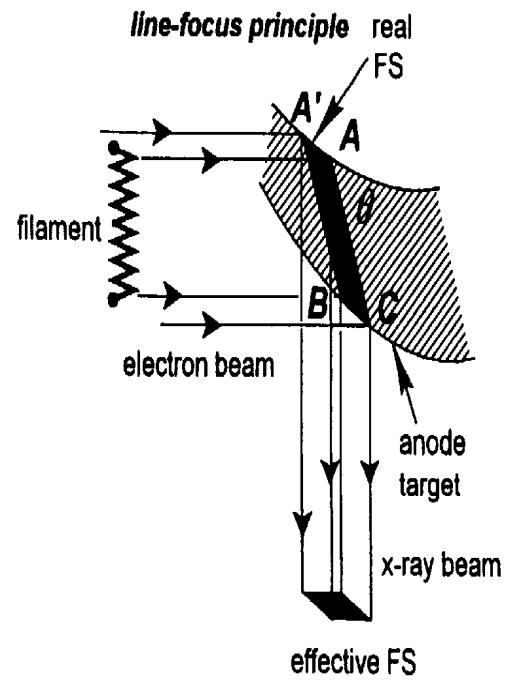
# Formas de Onda e “Ripple” de Diversos Geradores

Generator type	Typical voltage waveform	kV ripple
Single-phase 1-pulse (self rectified)		100%
Single-phase 2-pulse (full wave rectified)		100%
3-phase 6-pulse		13% - 25%
3-phase 12-pulse		3% - 10%
Medium-high frequency inverter		4% - 15%
Constant Potential		<2%

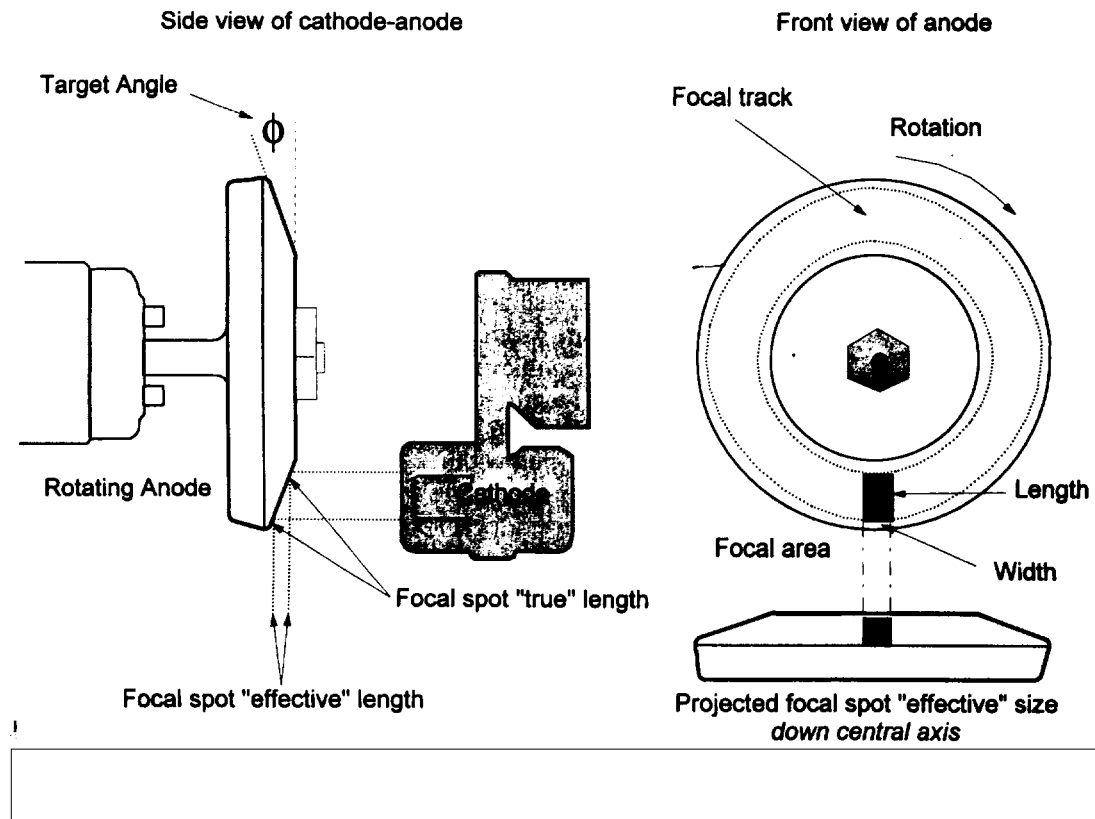
# Perdas de Resolução devido a Fatores Geométricos



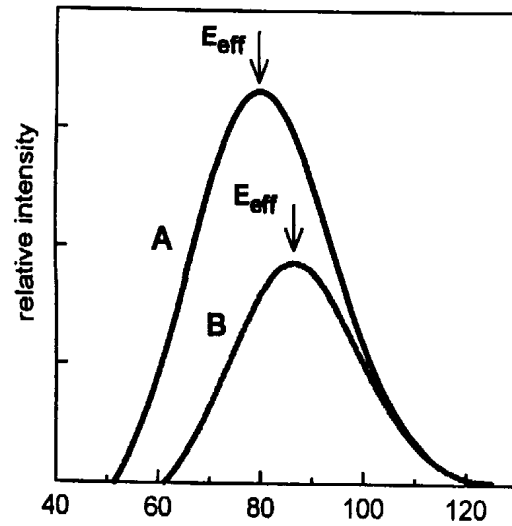
# Efeito da Angulação do Anodo



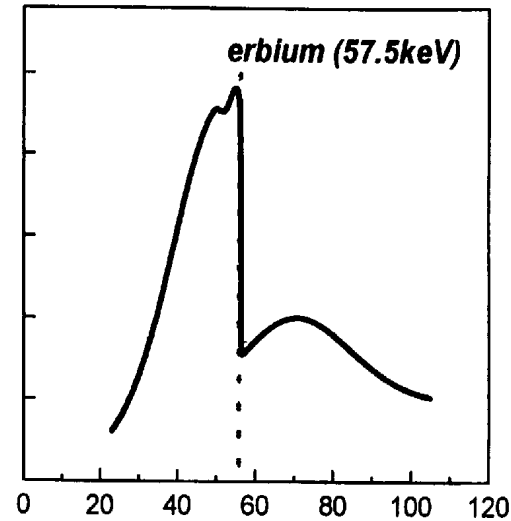
# Angulação do Anodo Rotatório



# Efeitos da Filtração do Feixe



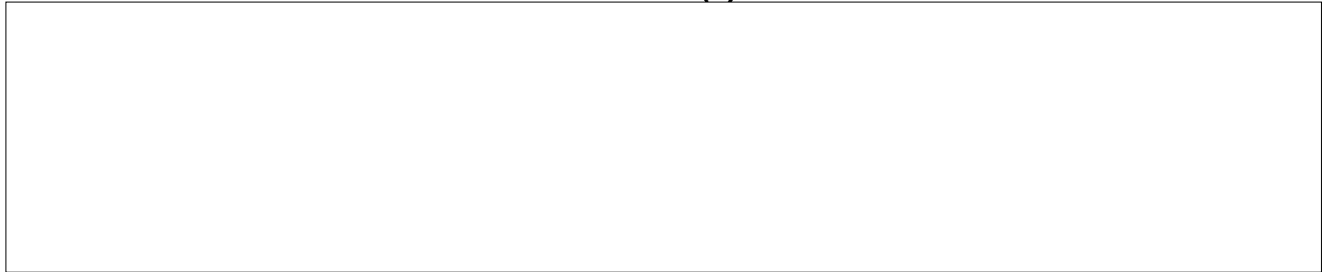
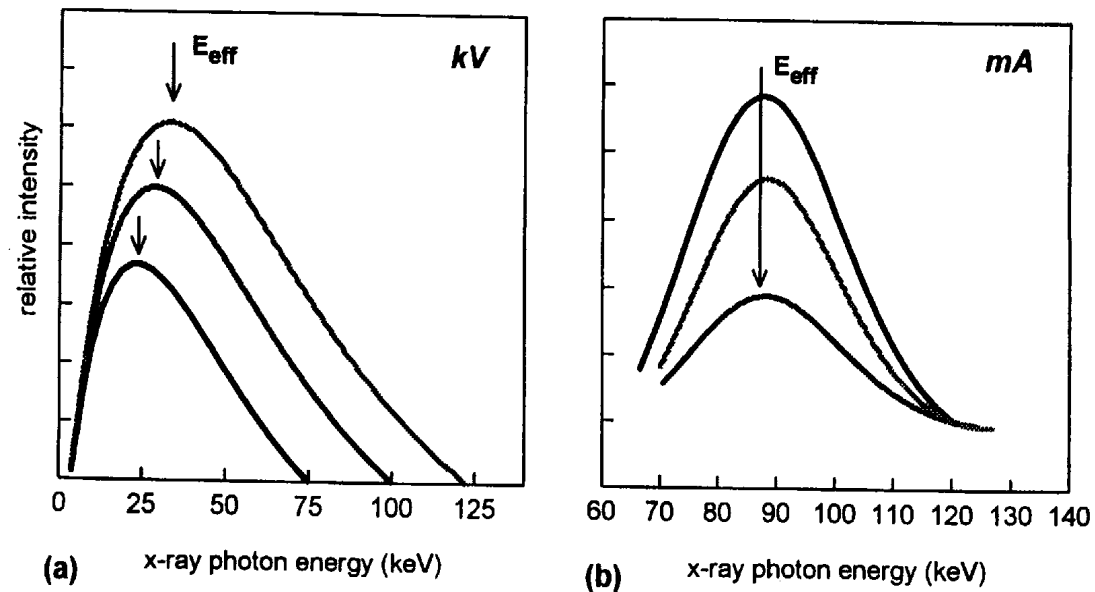
(a) x-ray photon energy (keV)



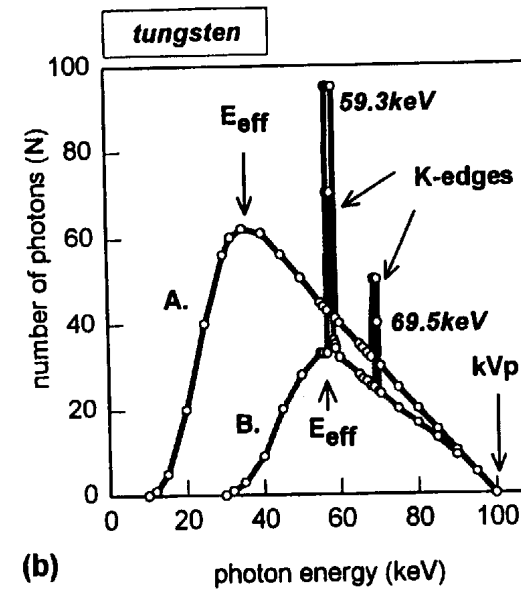
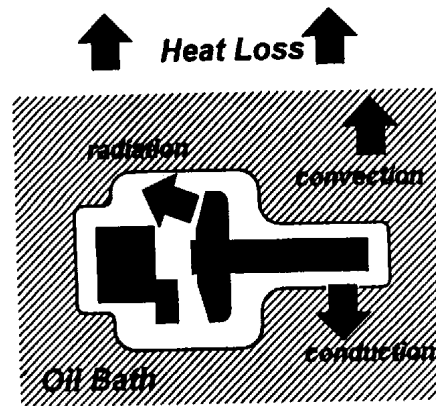
(b) x-ray photon energy (keV)



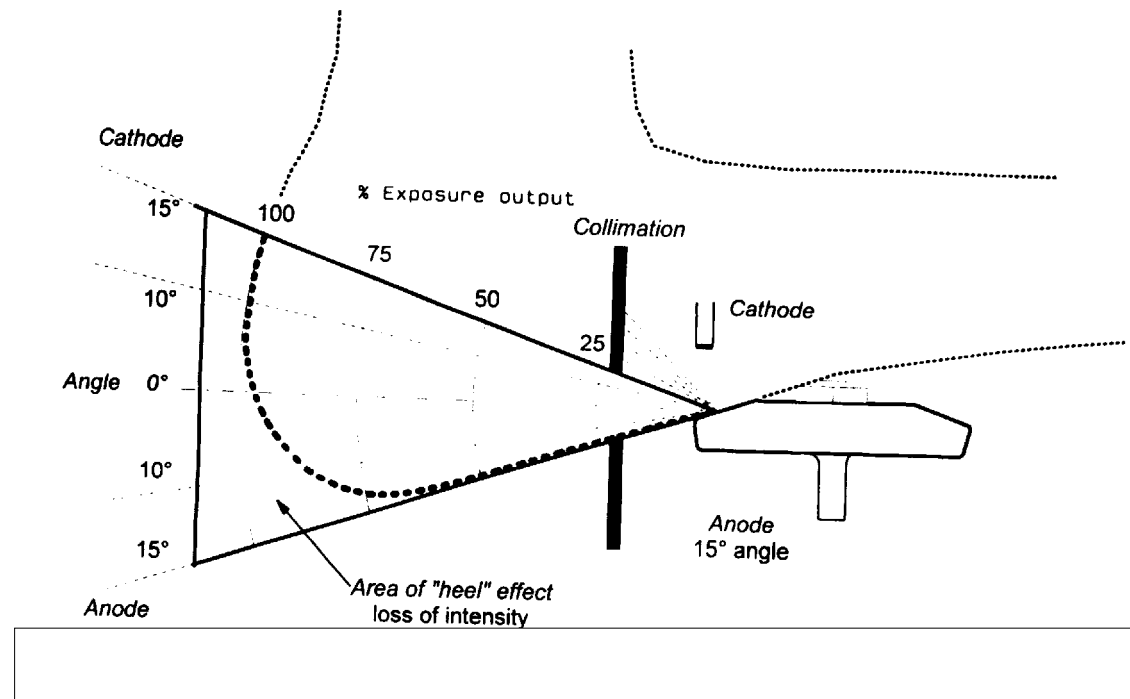
# Variação do Espectro de raios X com a Tensão e a Corrente do Tubo



# Espectro do feixe de raios X e o Efeito da Filtração

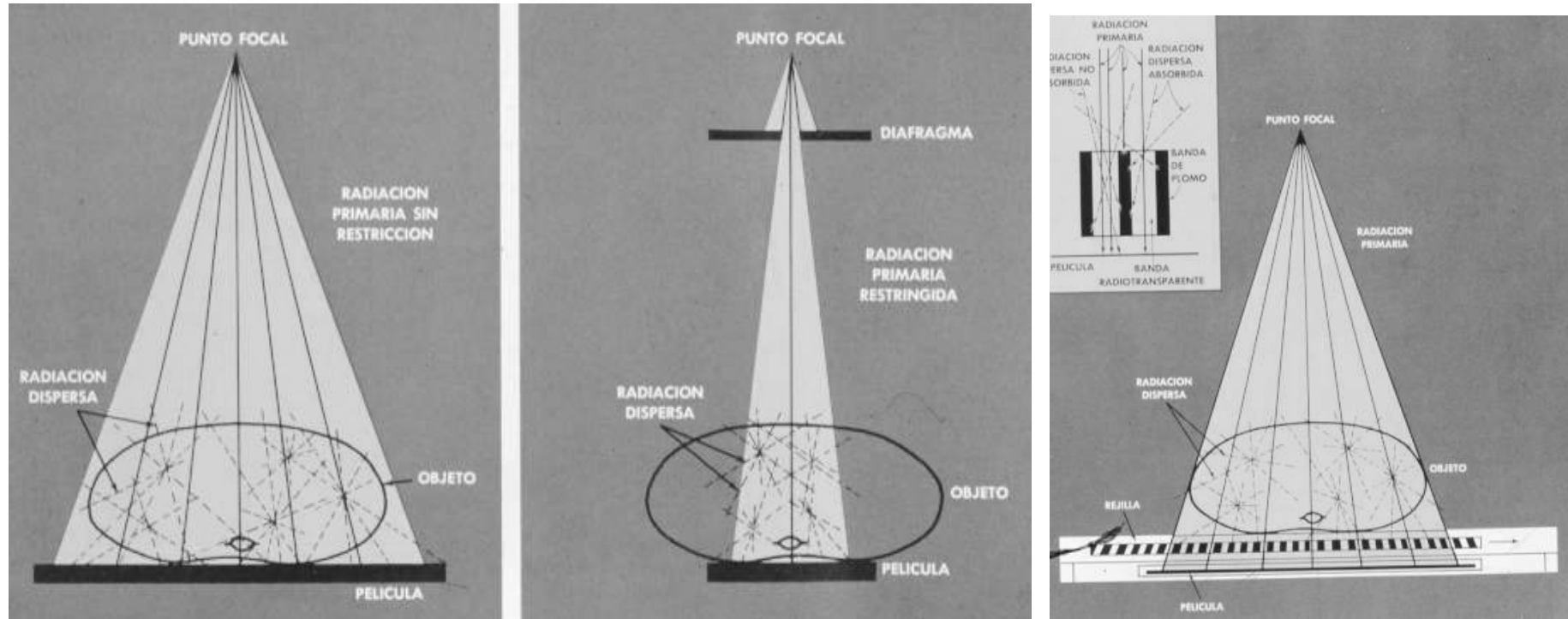


# Efeito Anódico





# Radiación Espalhada



# Secção transversal da perna

