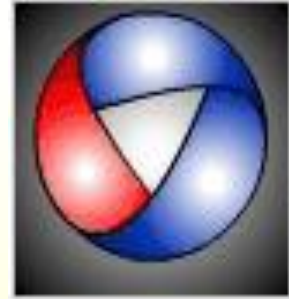


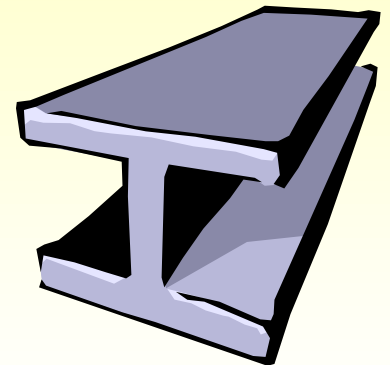


Universidad Nacional de Cuyo
Facultad de Ingeniería



Unidad N°5:
TEORÍA DE LAS ALEACIONES

Dra. Ana María Furlani



Plan de la Exposición

A. Soluciones Sólidas

Solución sólida intersticial.

Solución sólida sustitucional.

B. Análisis Térmico. Curvas de Enfriamiento.

C. Diagramas de Equilibrio.

Sistemas isomórficos binarios.

Sistemas eutécticos binarios.

Sistemas con fases o comp. terminales e intermedios.

Compuestos intermetálicos.

Reacciones eutectoide y peritética.

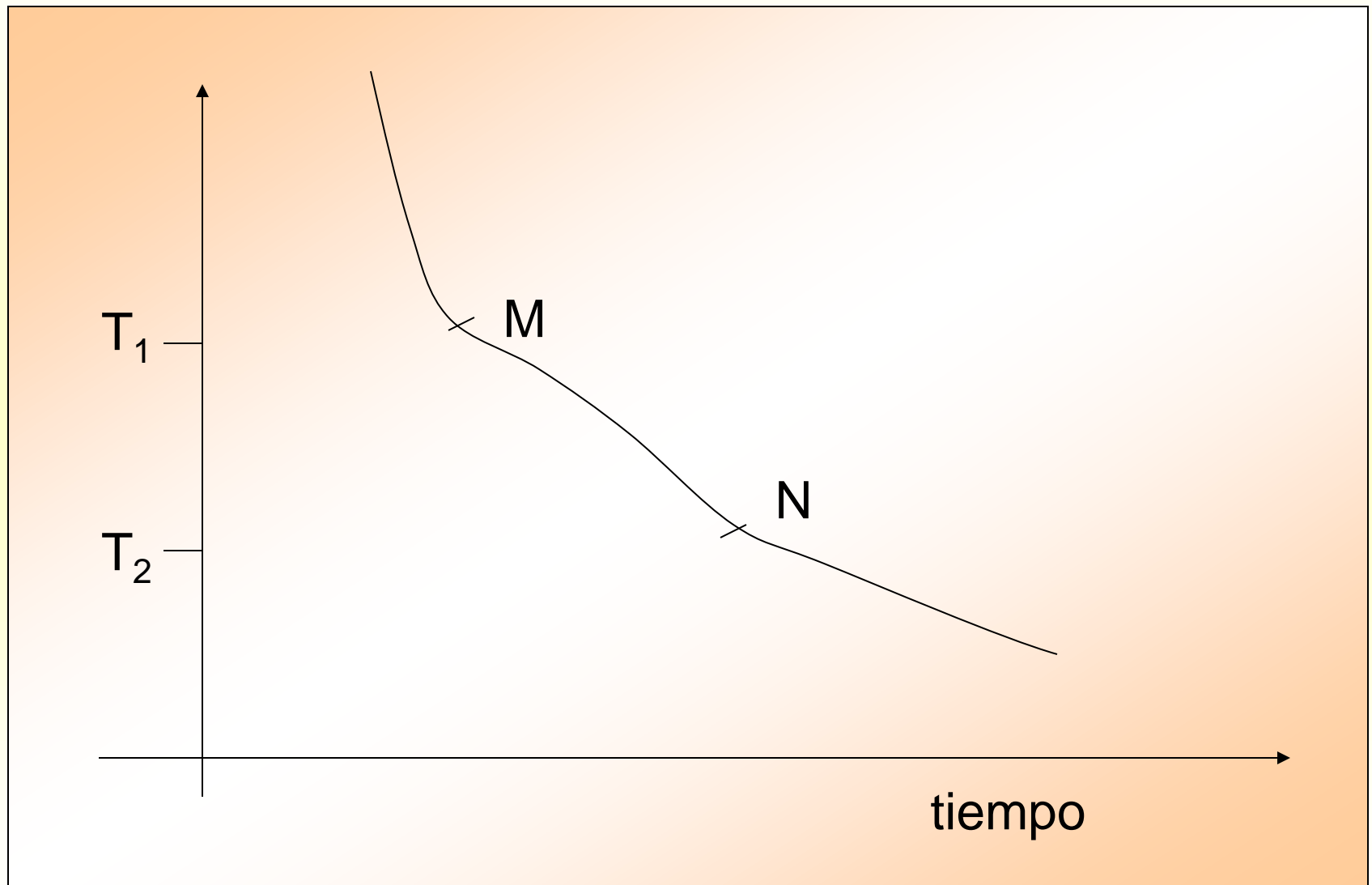
Transformaciones de fases congruentes e incongruentes.

Desarrollo de microestructuras durante el enfriamiento.

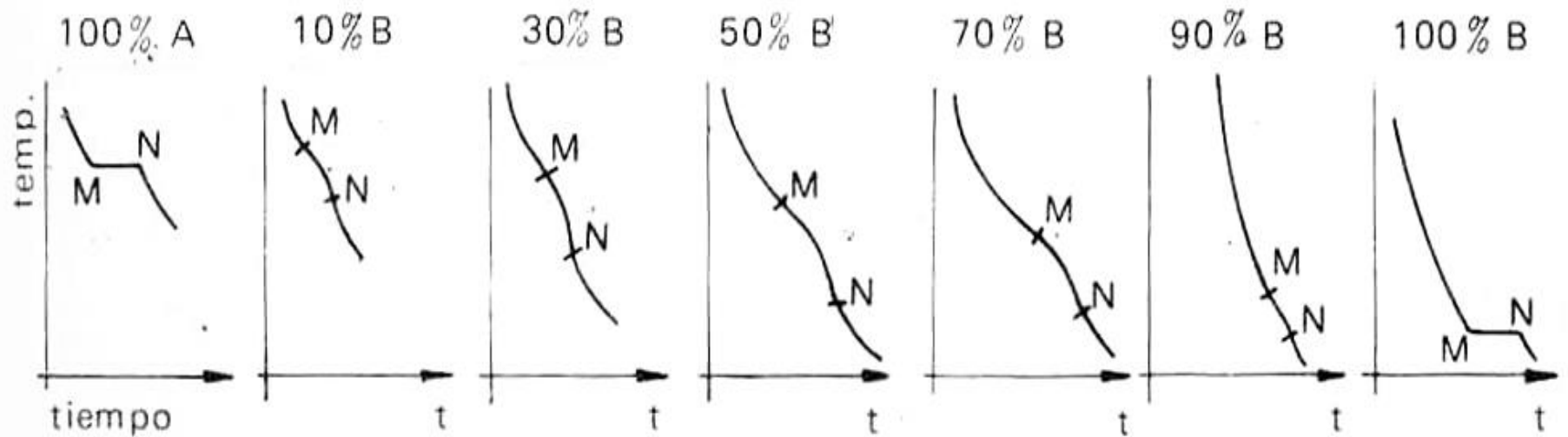
Regla de Fases.

Determinación de la composición y cantidad de fases.

Curva de Enfriamiento



Curva de Enfriamiento para distintas composiciones de la aleación.



Curvas de enfriamiento para las distintas composiciones de la aleación

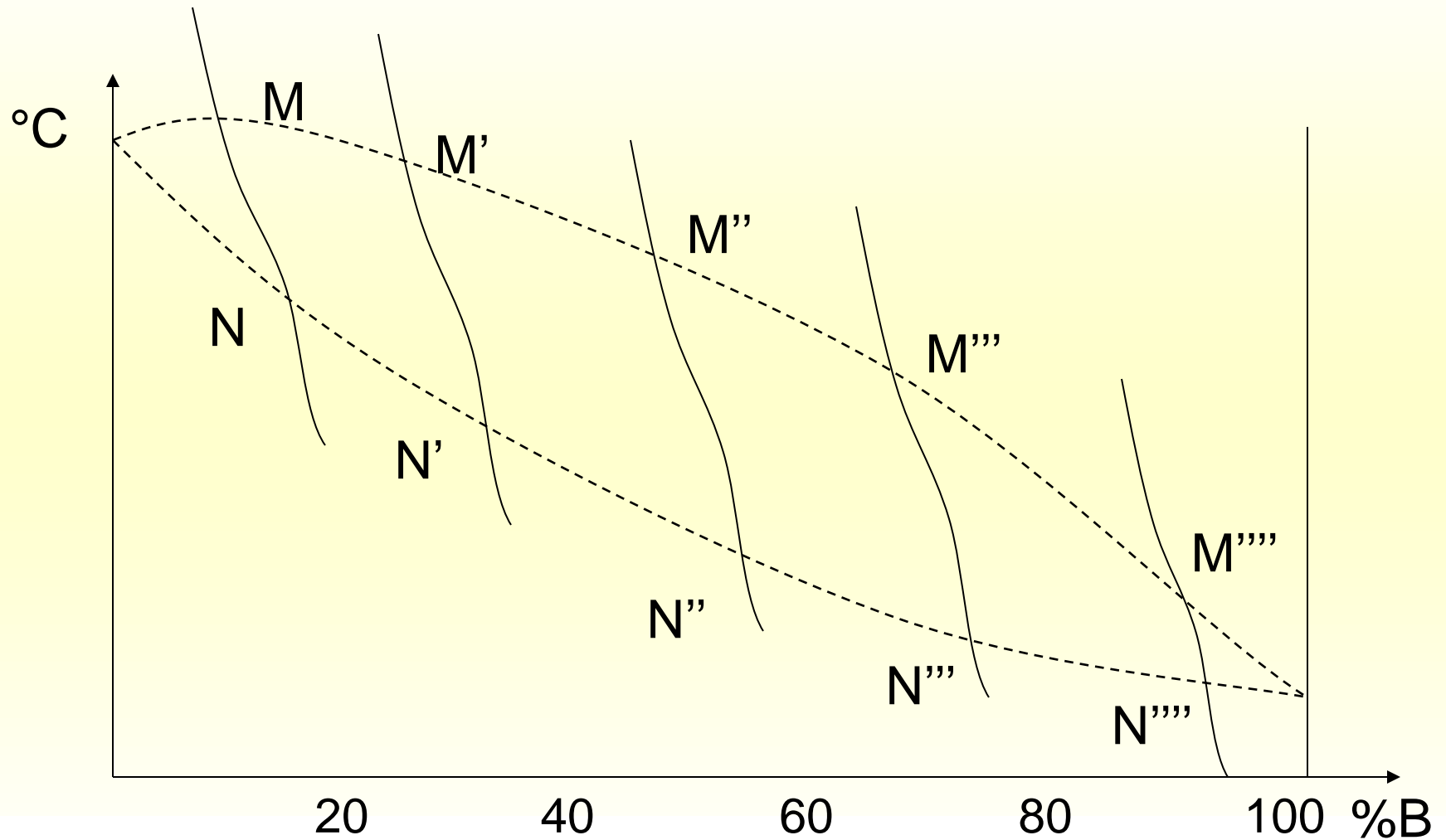
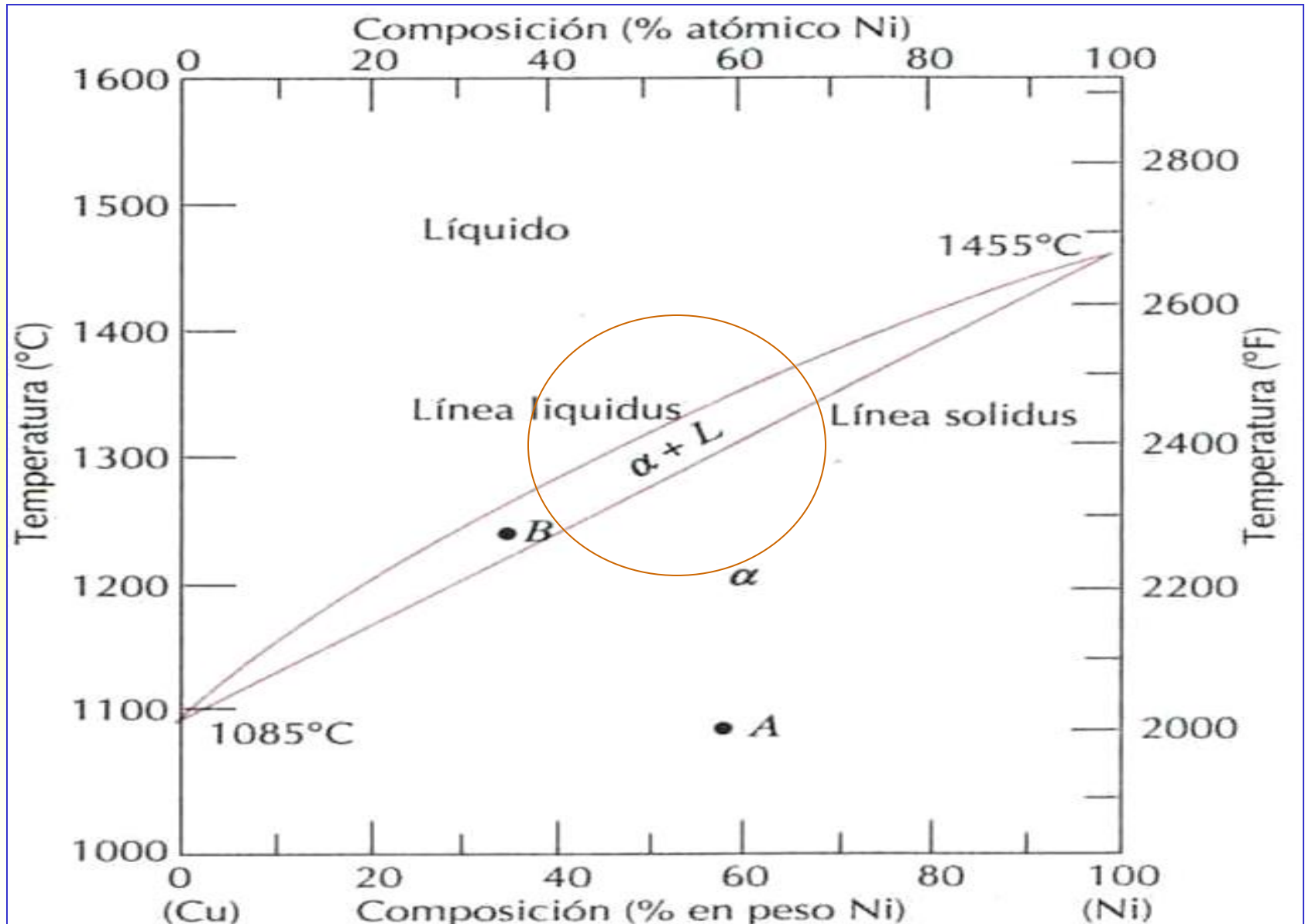
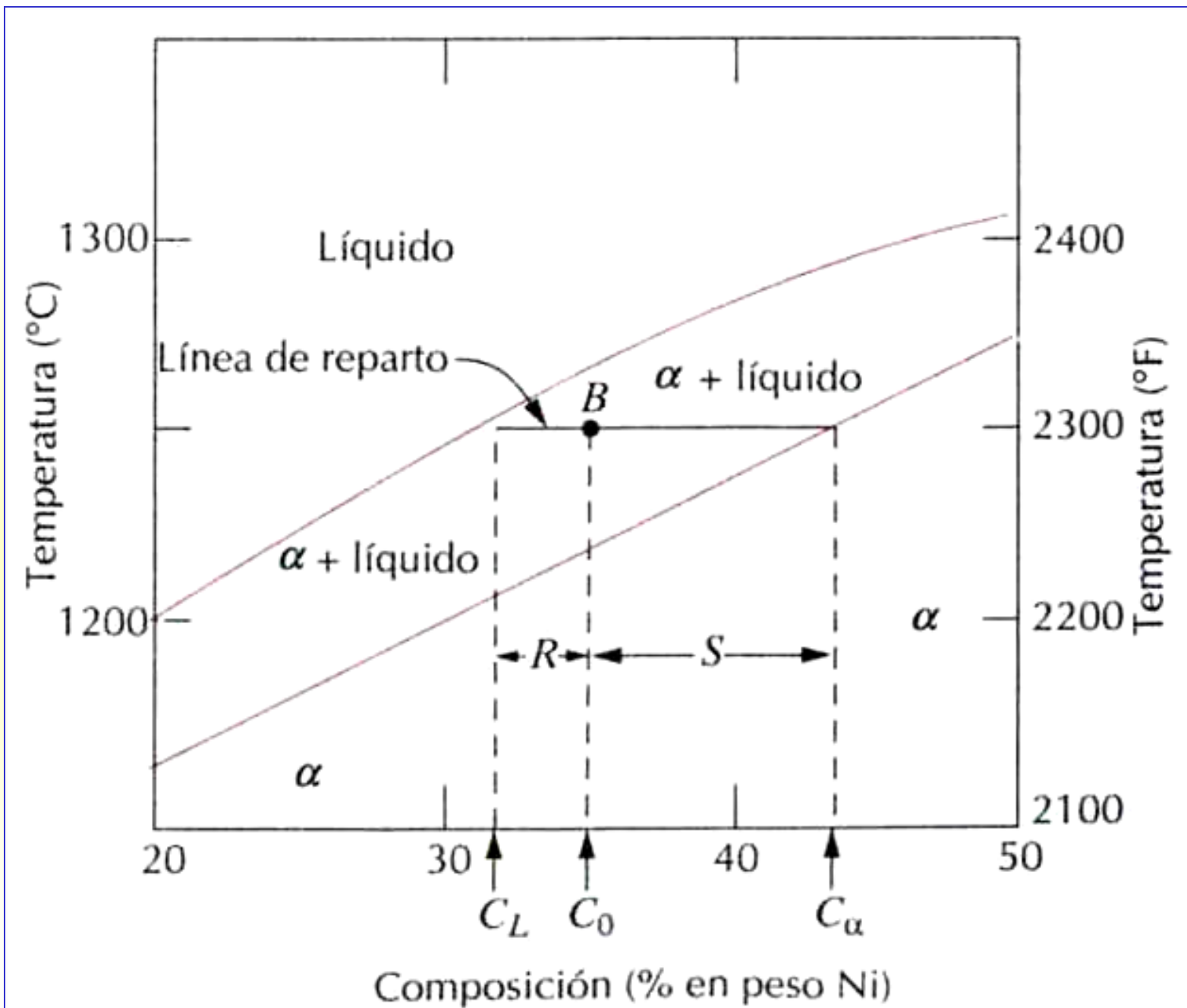


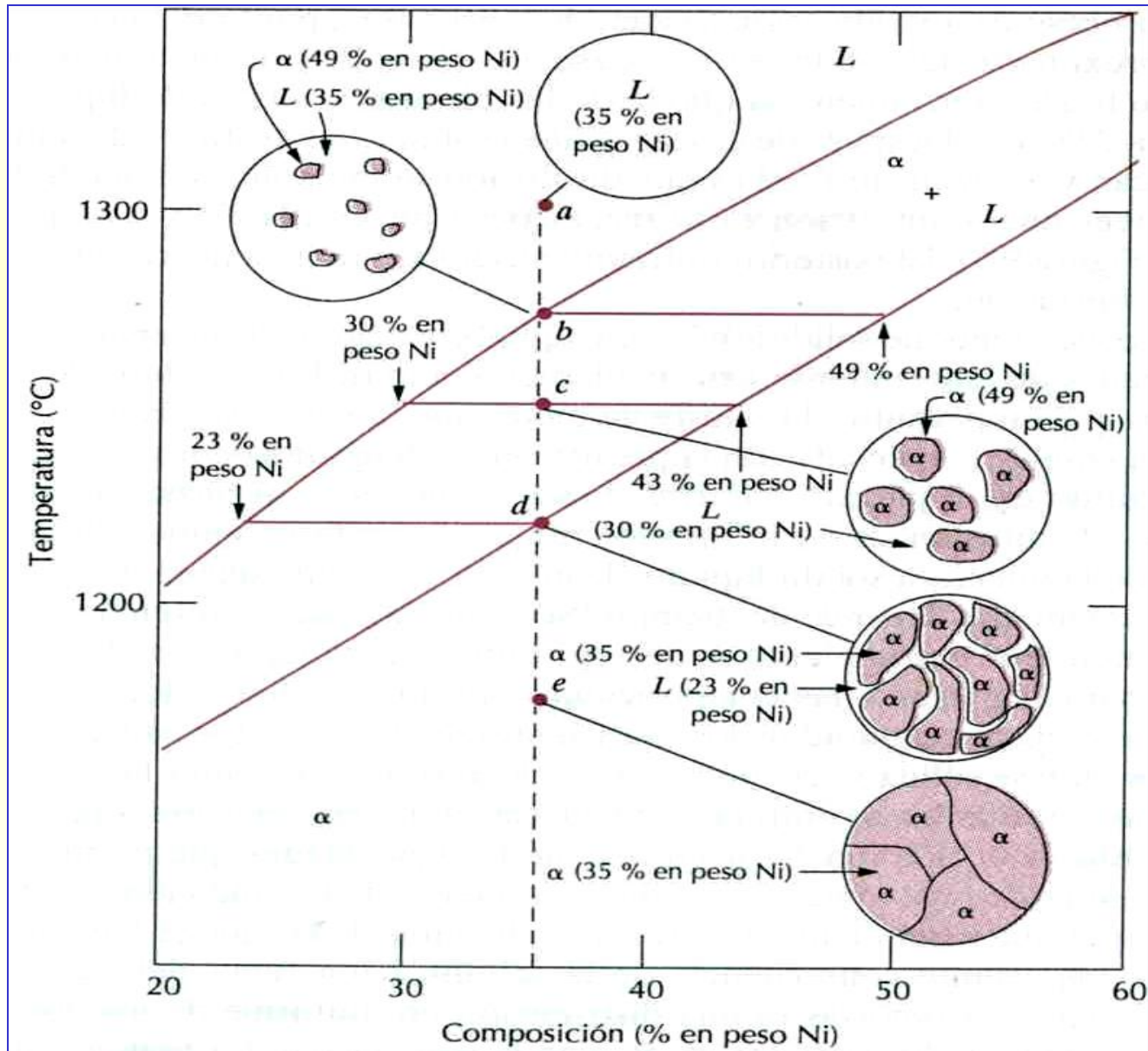
Diagrama Binario Cobre - Níquel

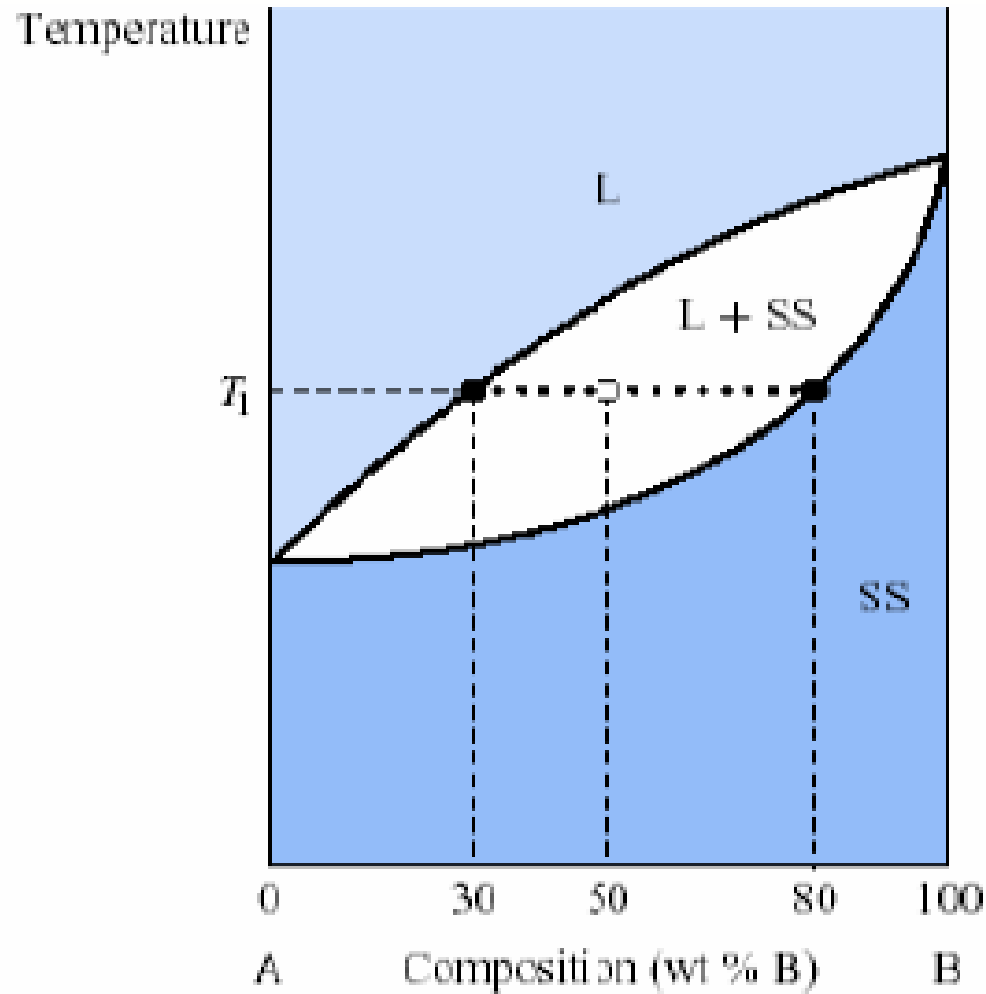




Detalle de Diagrama Binario Cu- Ni

Desarrollo de microestructuras durante el enfriamiento



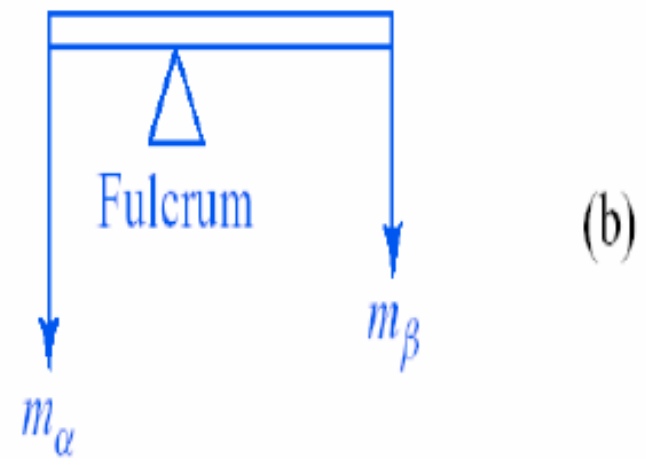
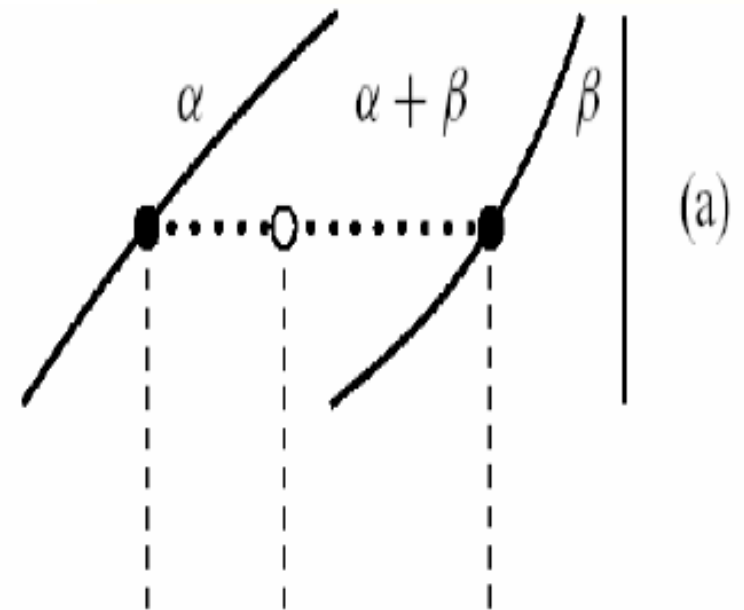
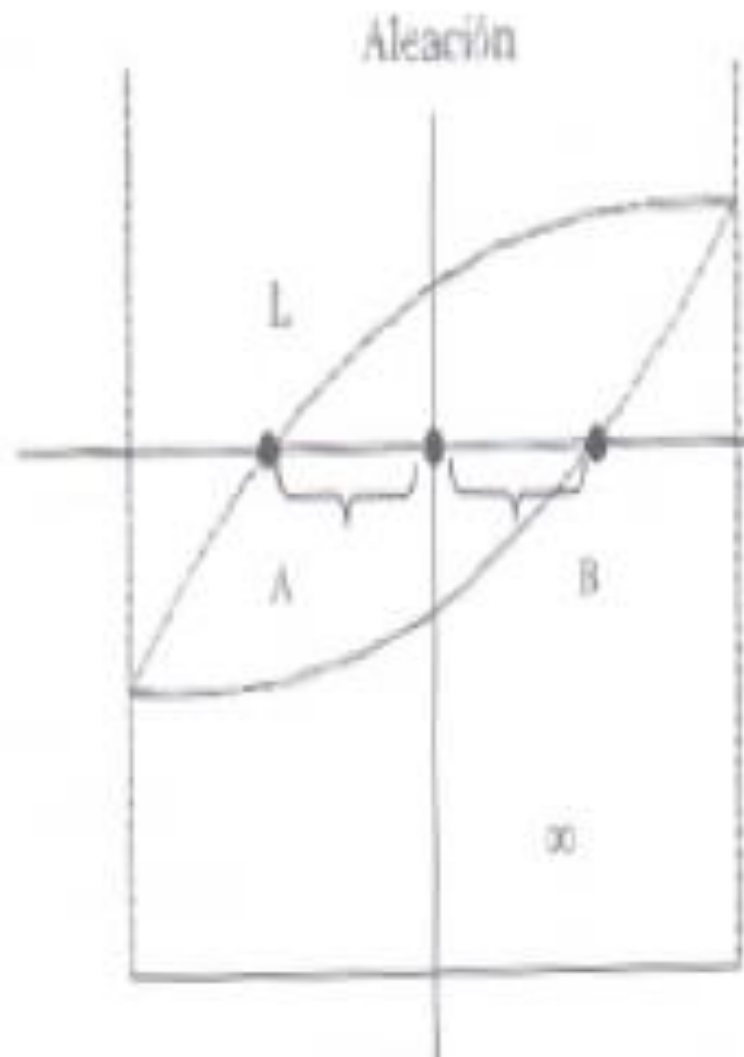


$$m_L + m_{SS} = m_{\text{total}}$$

$$0.30m_L + 0.80m_{SS} = 0.50m_{\text{total}}$$

$$\rightarrow m_L = 0.60m_{\text{total}}$$

$$m_{SS} = 0.40m_{\text{total}}$$



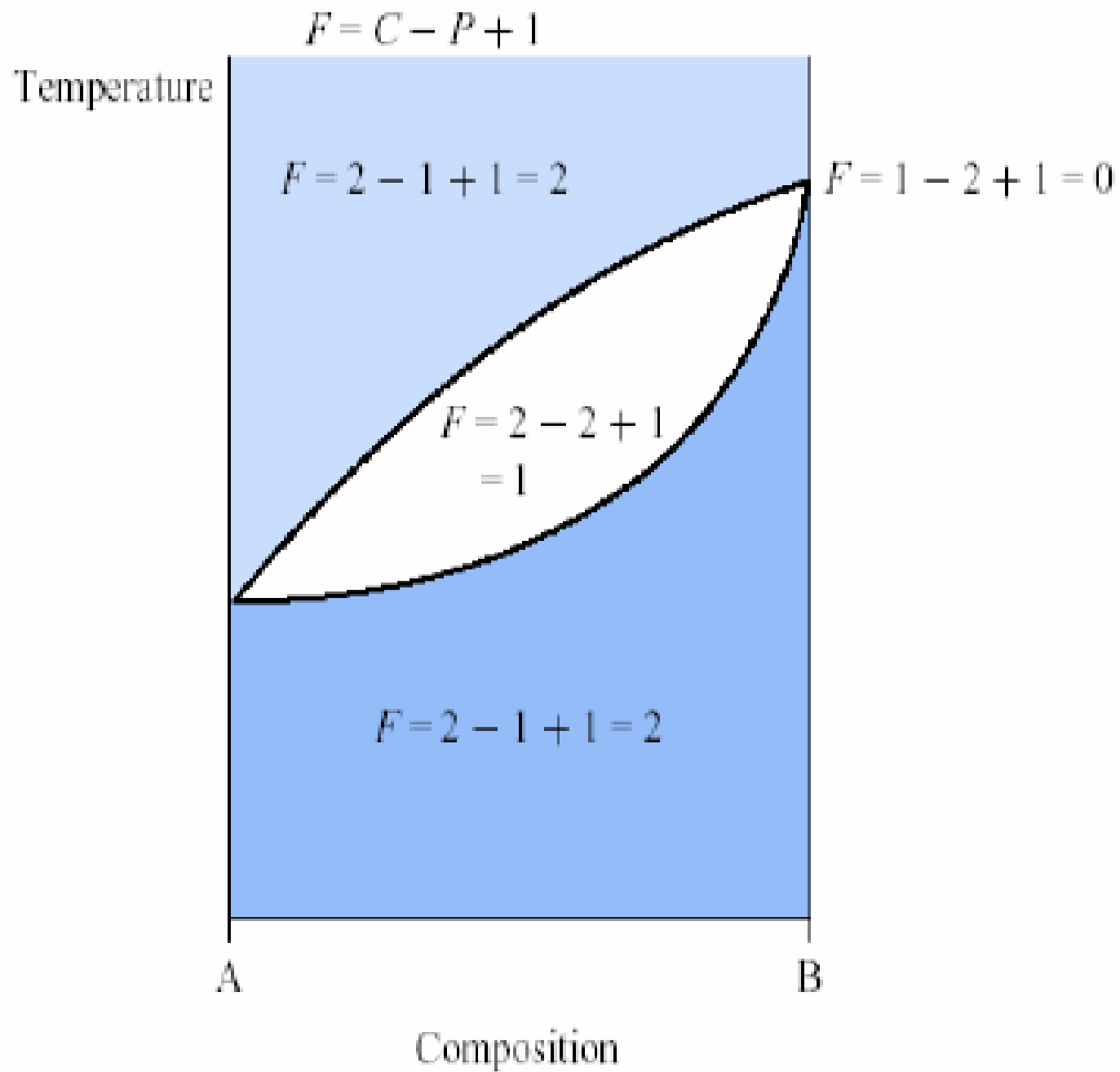
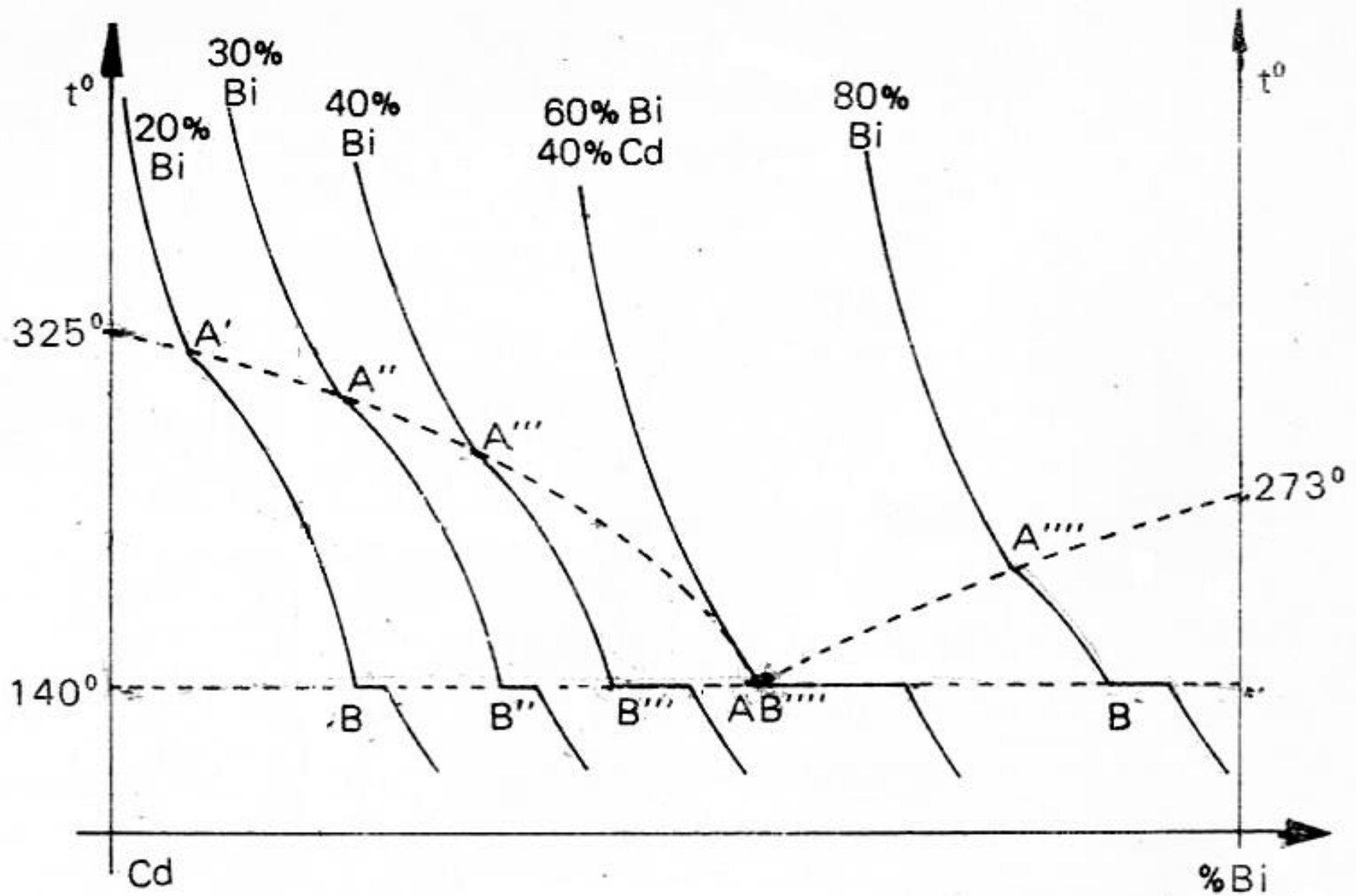
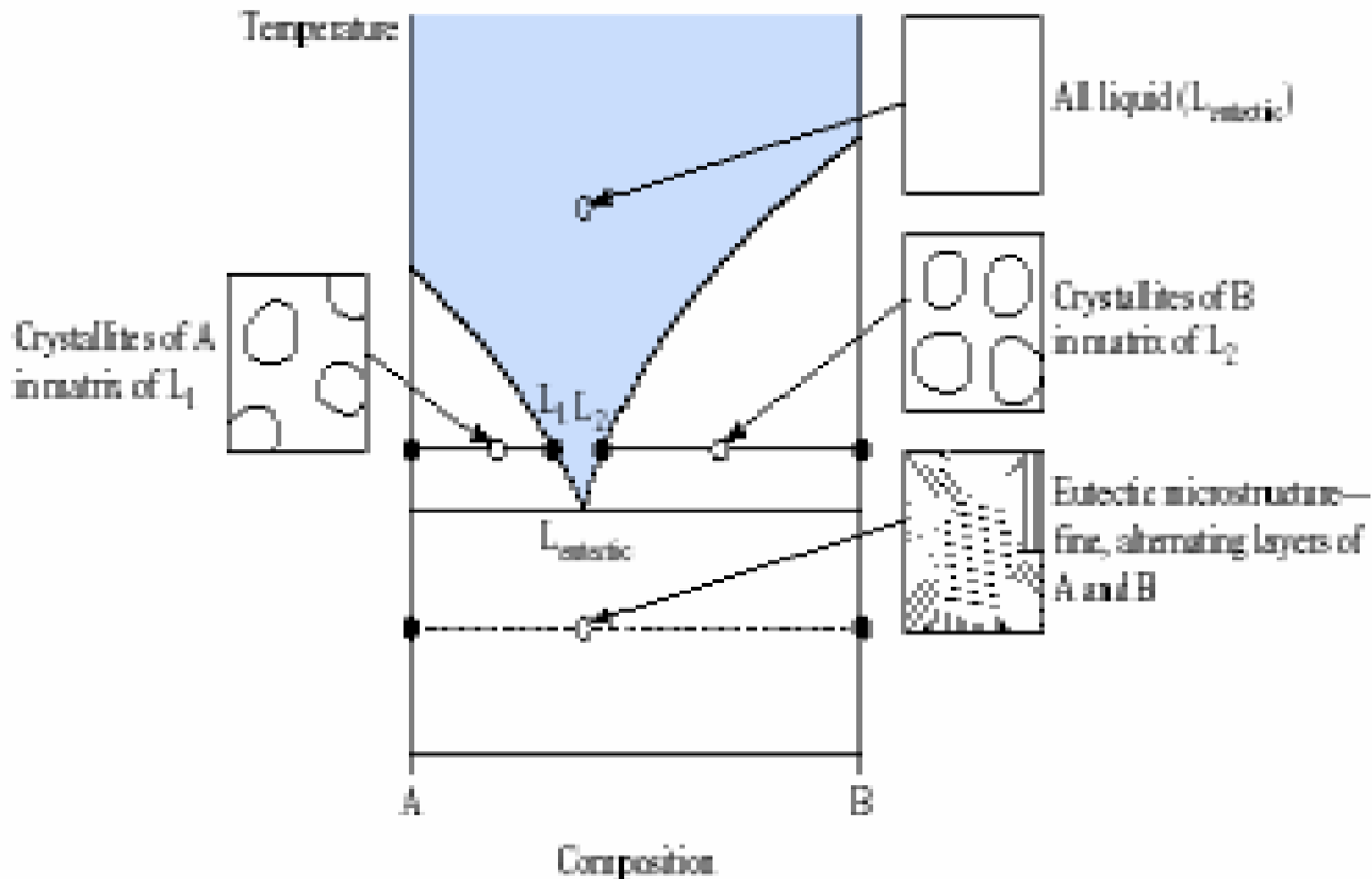
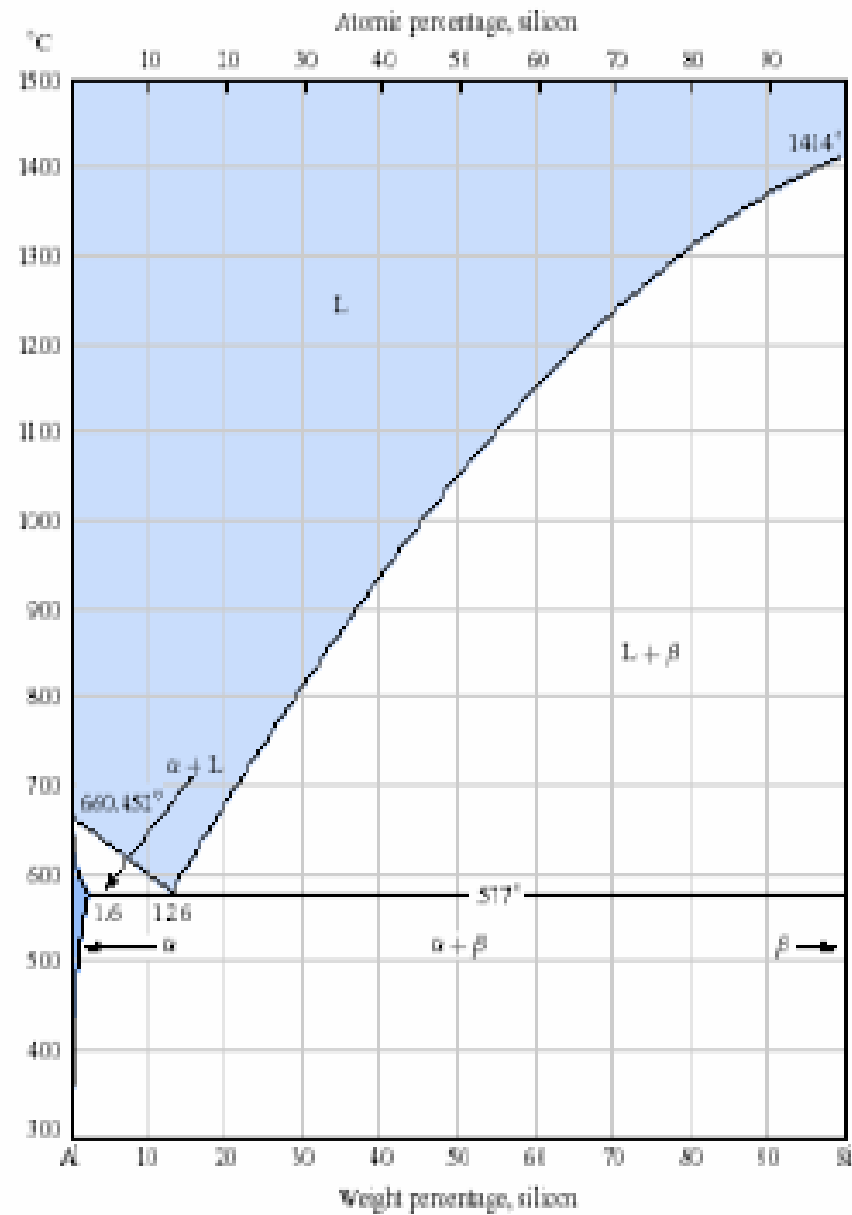


Diagrama Eutéctico







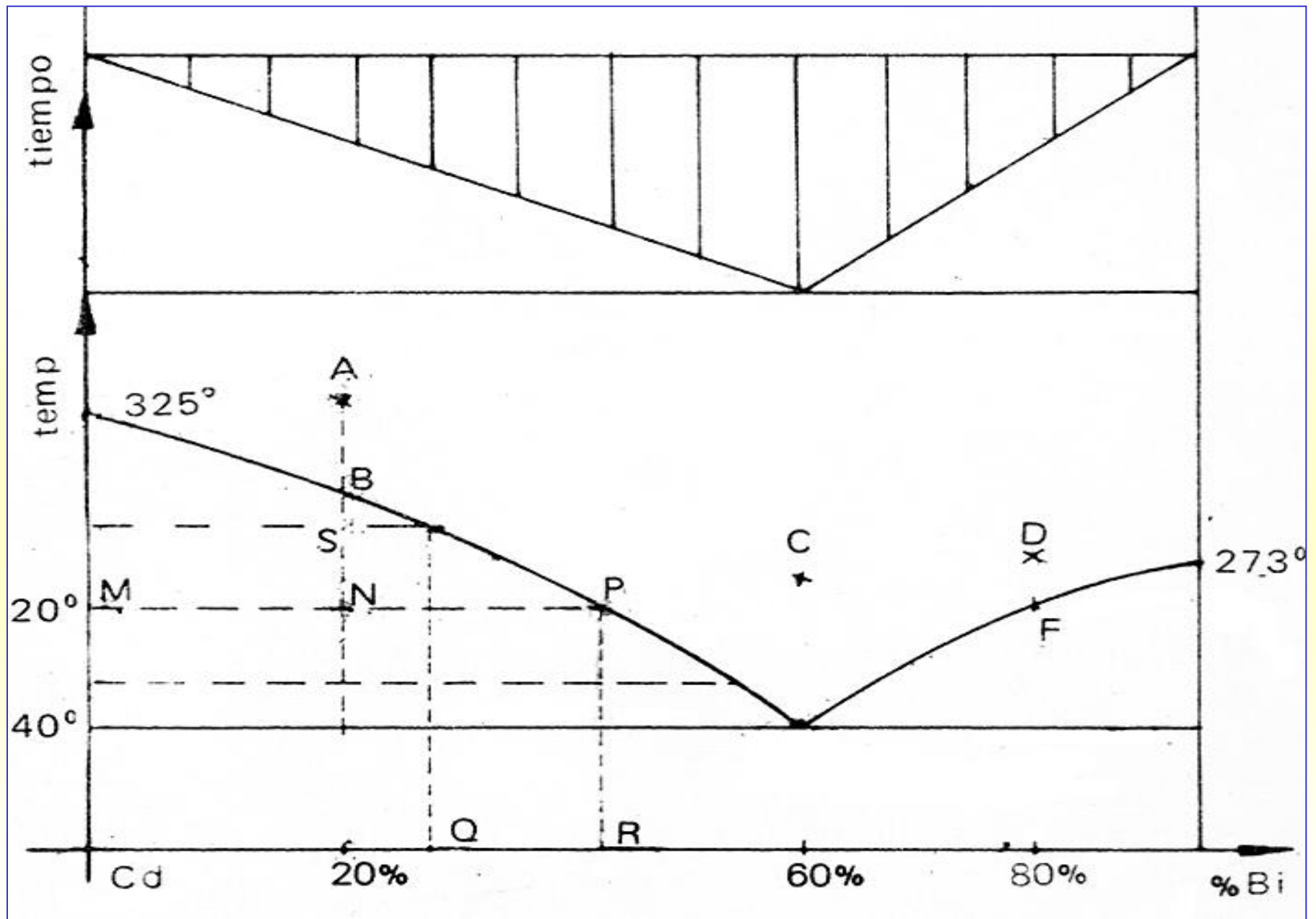


Diagrama Eutético

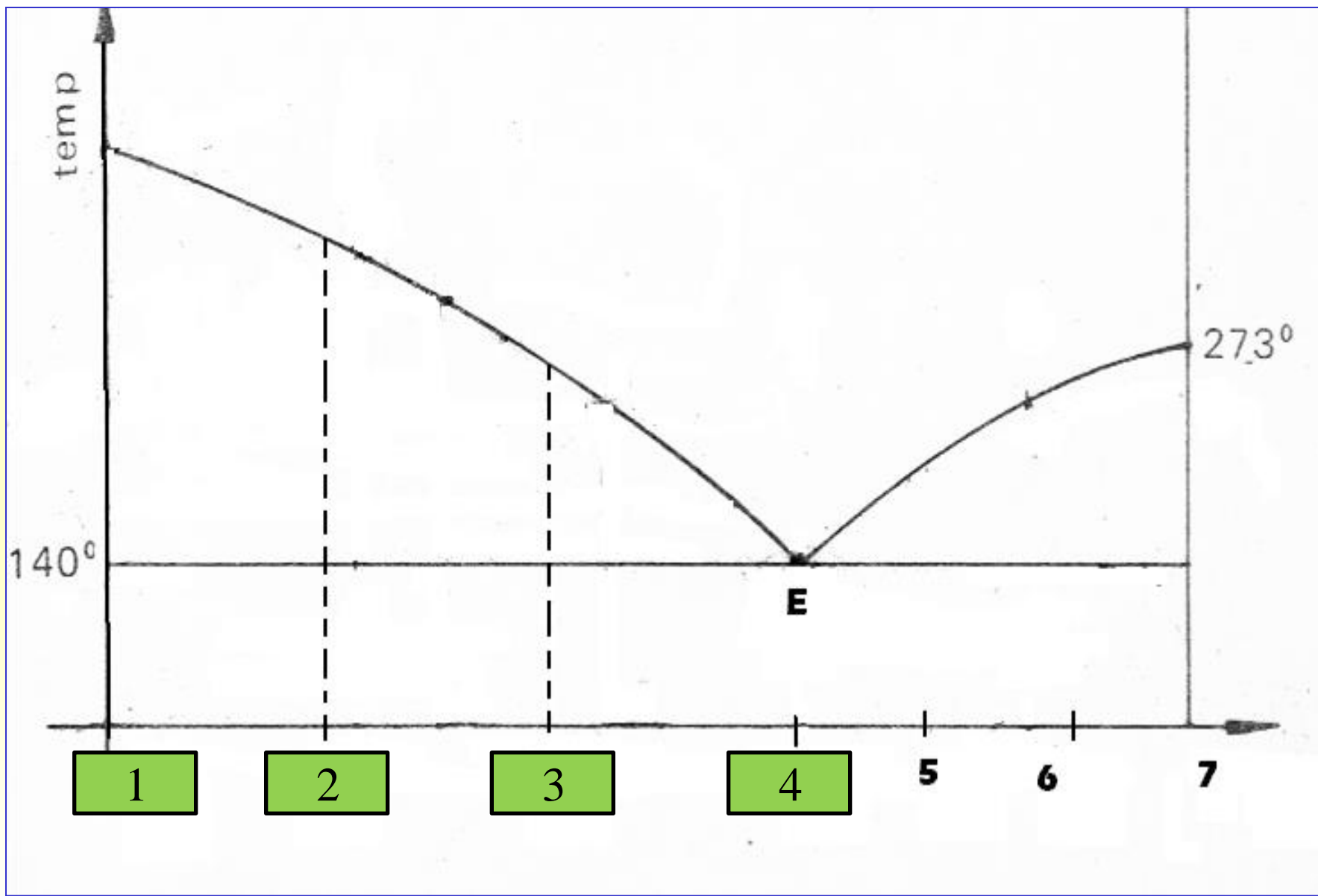
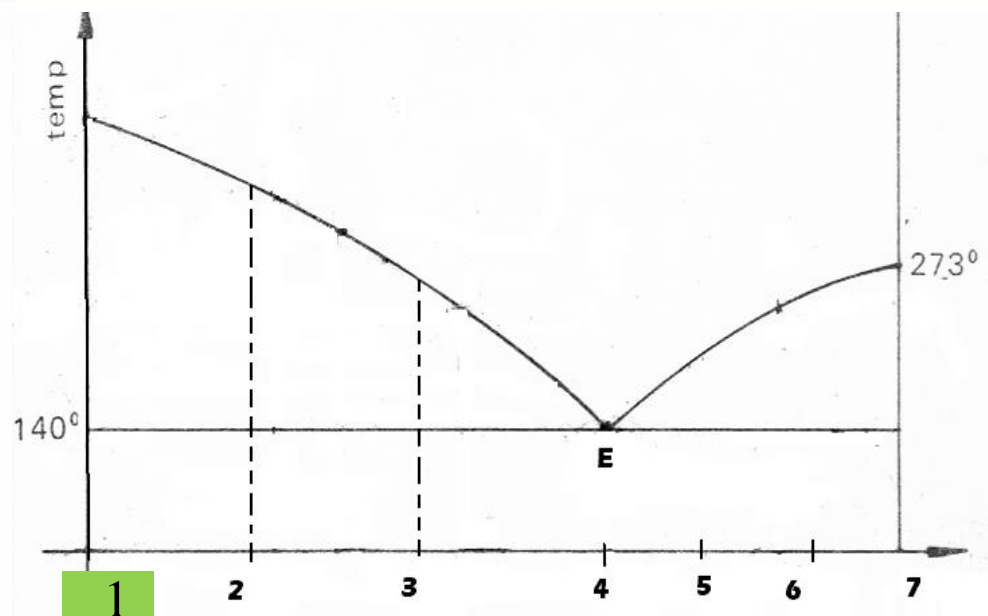
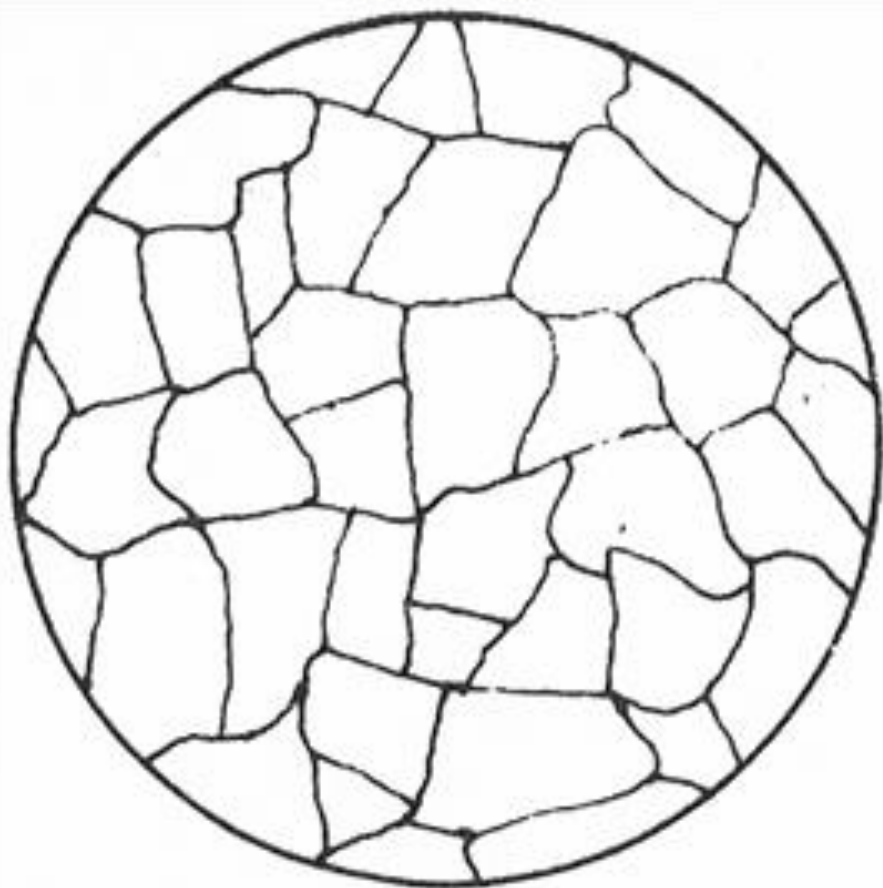
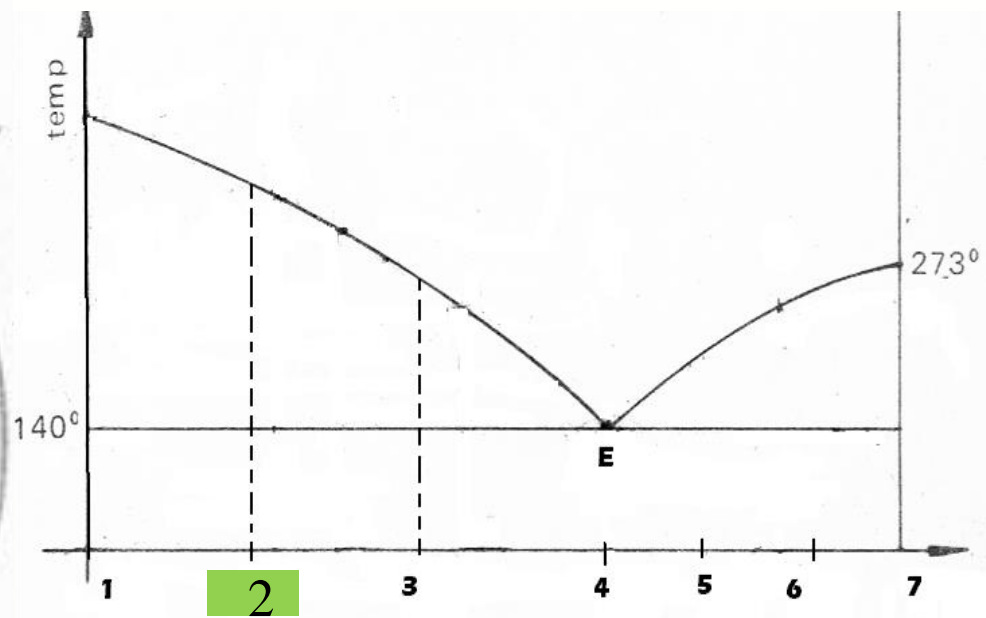
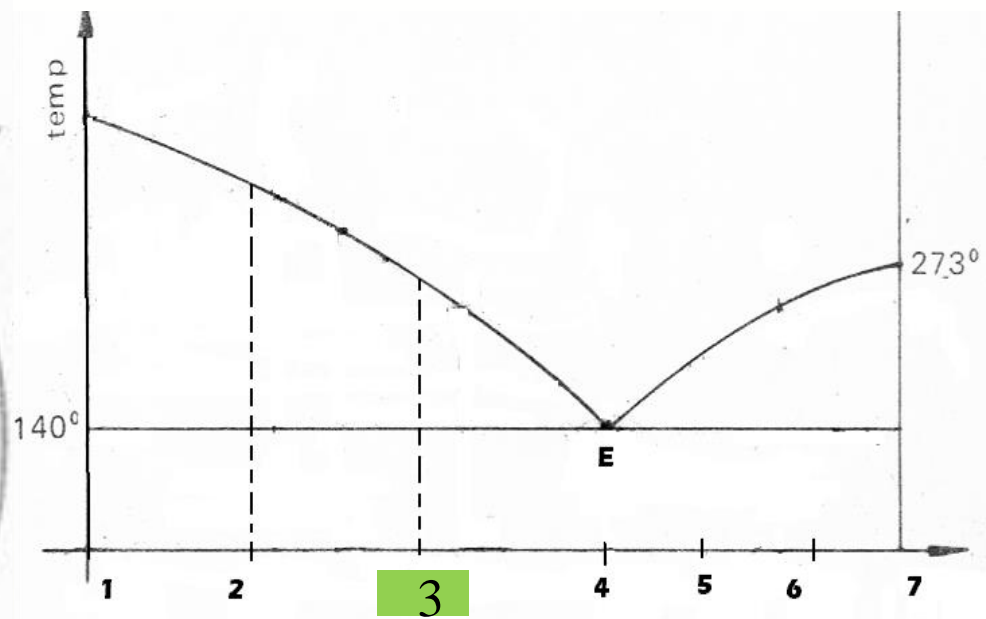
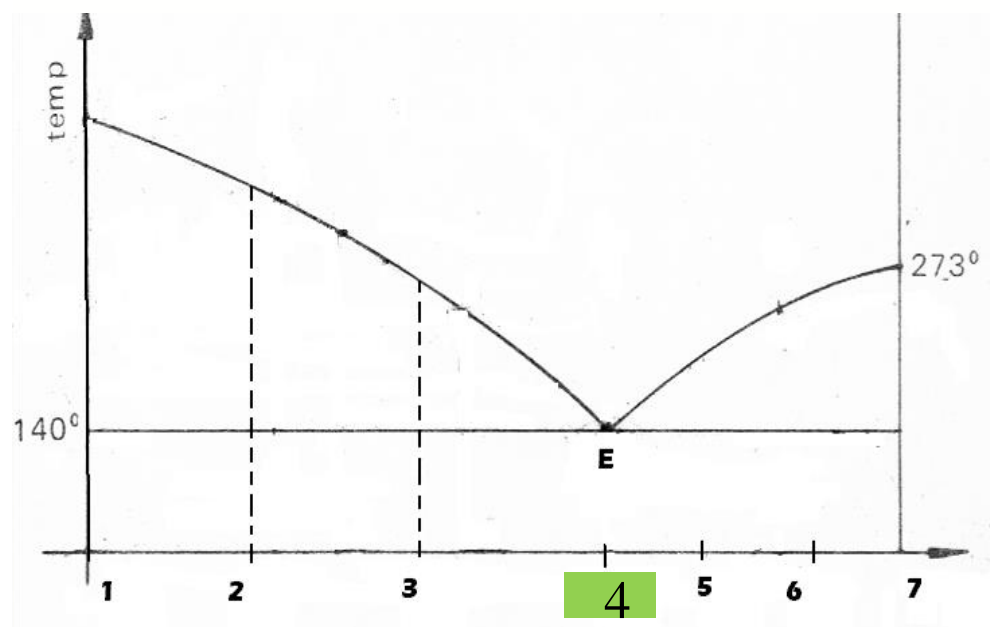
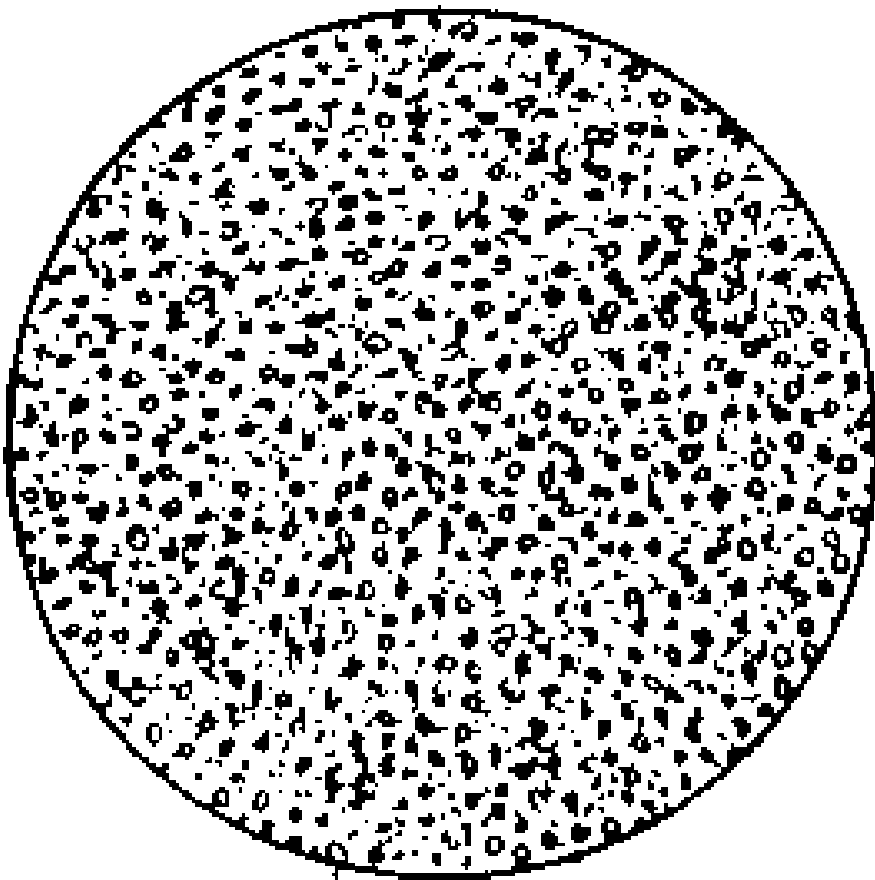


Diagrama Eutético

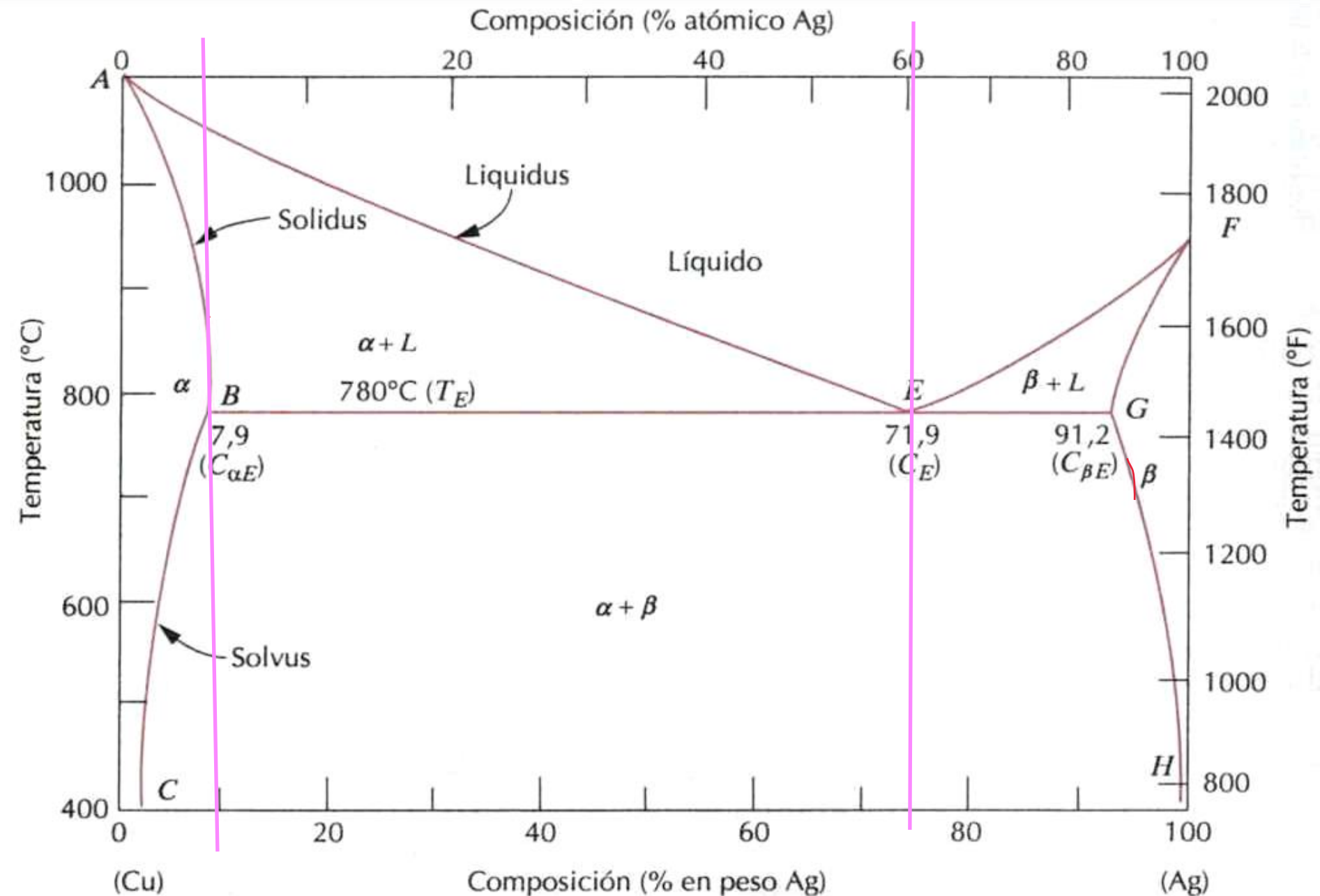


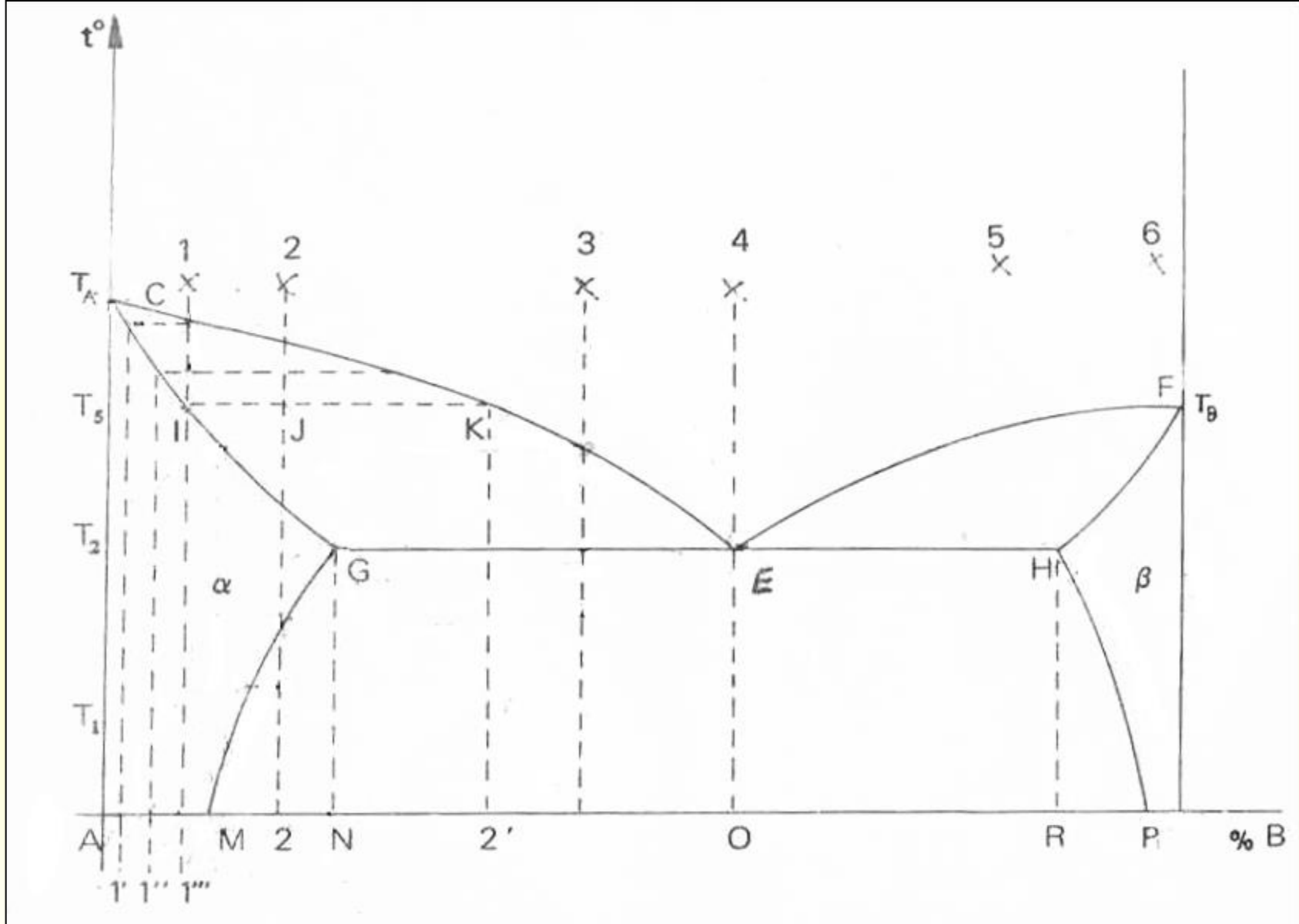






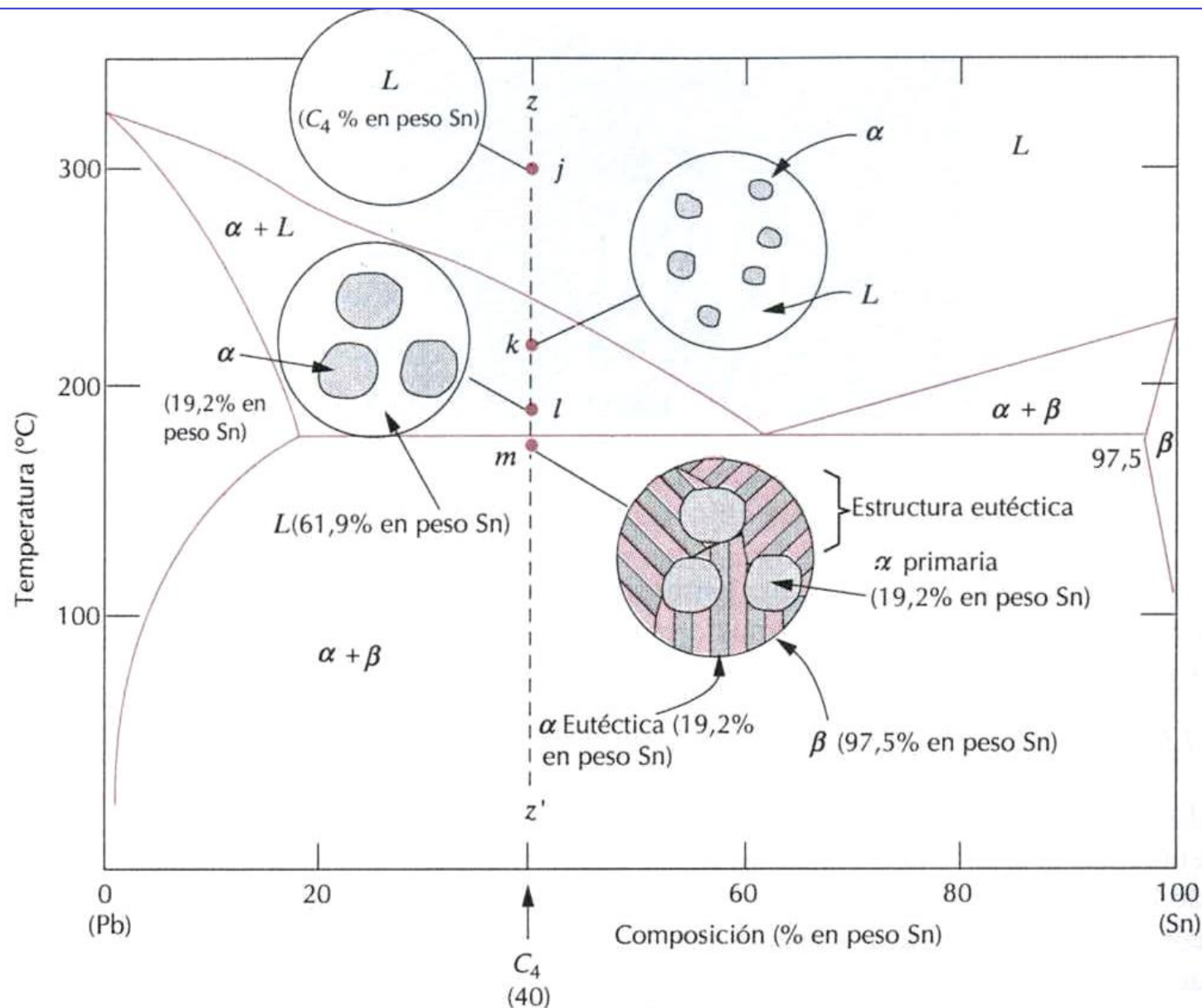
Sistema Eutéctico Binario Cobre-Plata



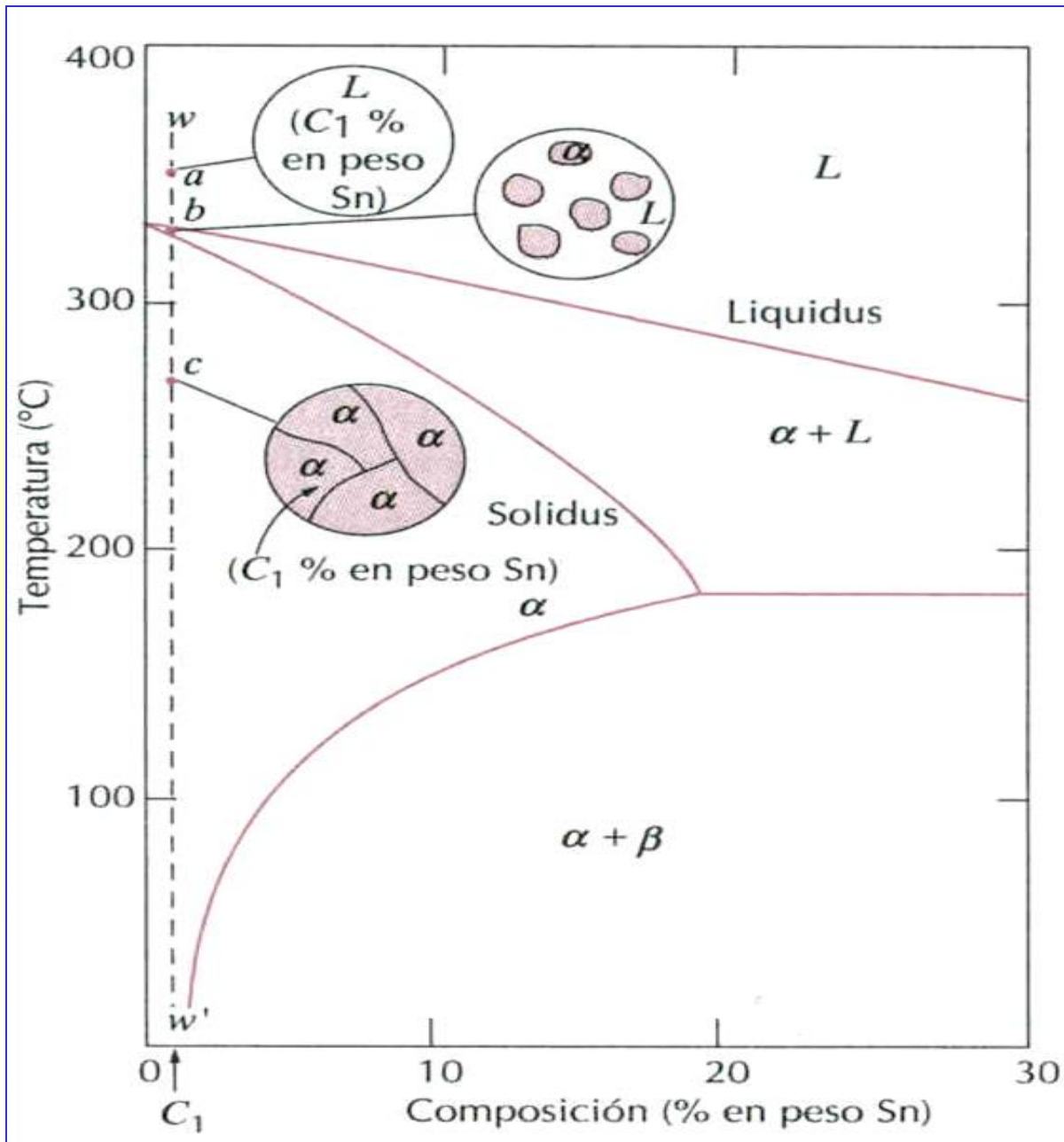


Aleaciones Binarias de Componentes Solubles en Estado Líquido (Parcialmente soluble en estado sólido)

Evolución de la Microestructura de una aleación Plomo – Estaño de composición C4 durante la solidificación

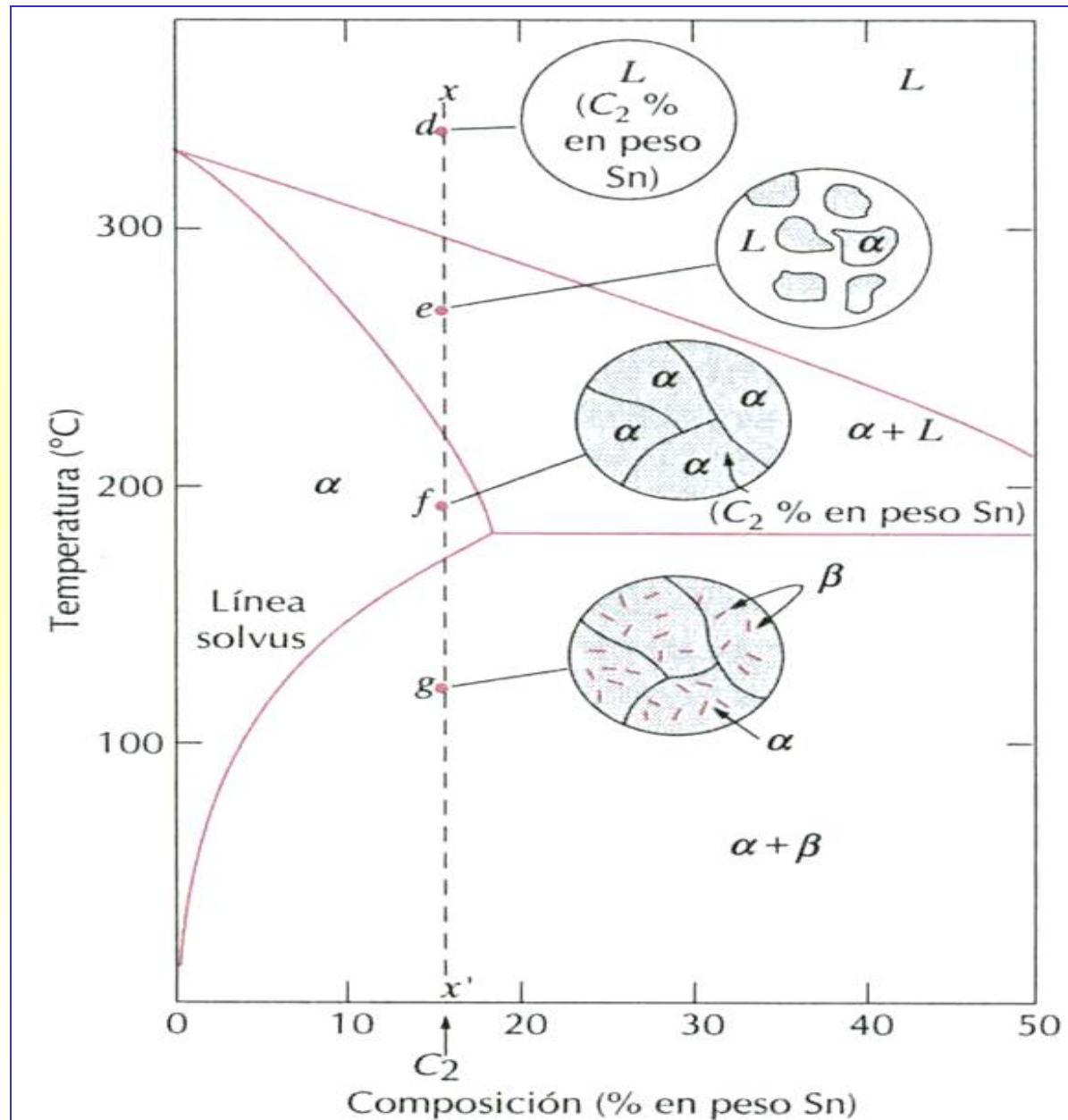


Evolución de la Microestructura de una aleación Plomo – Estaño de composición C1 durante la solidificación

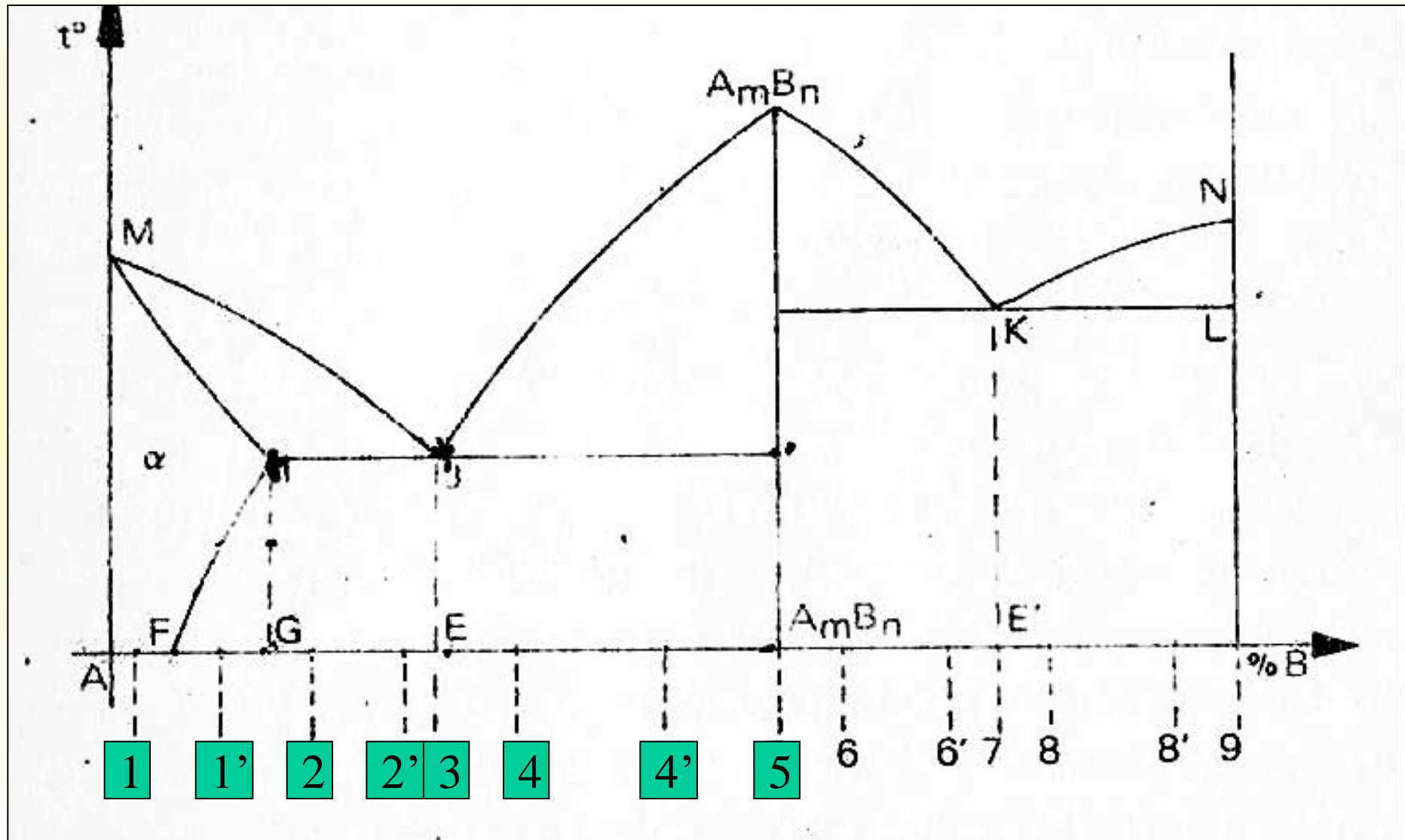


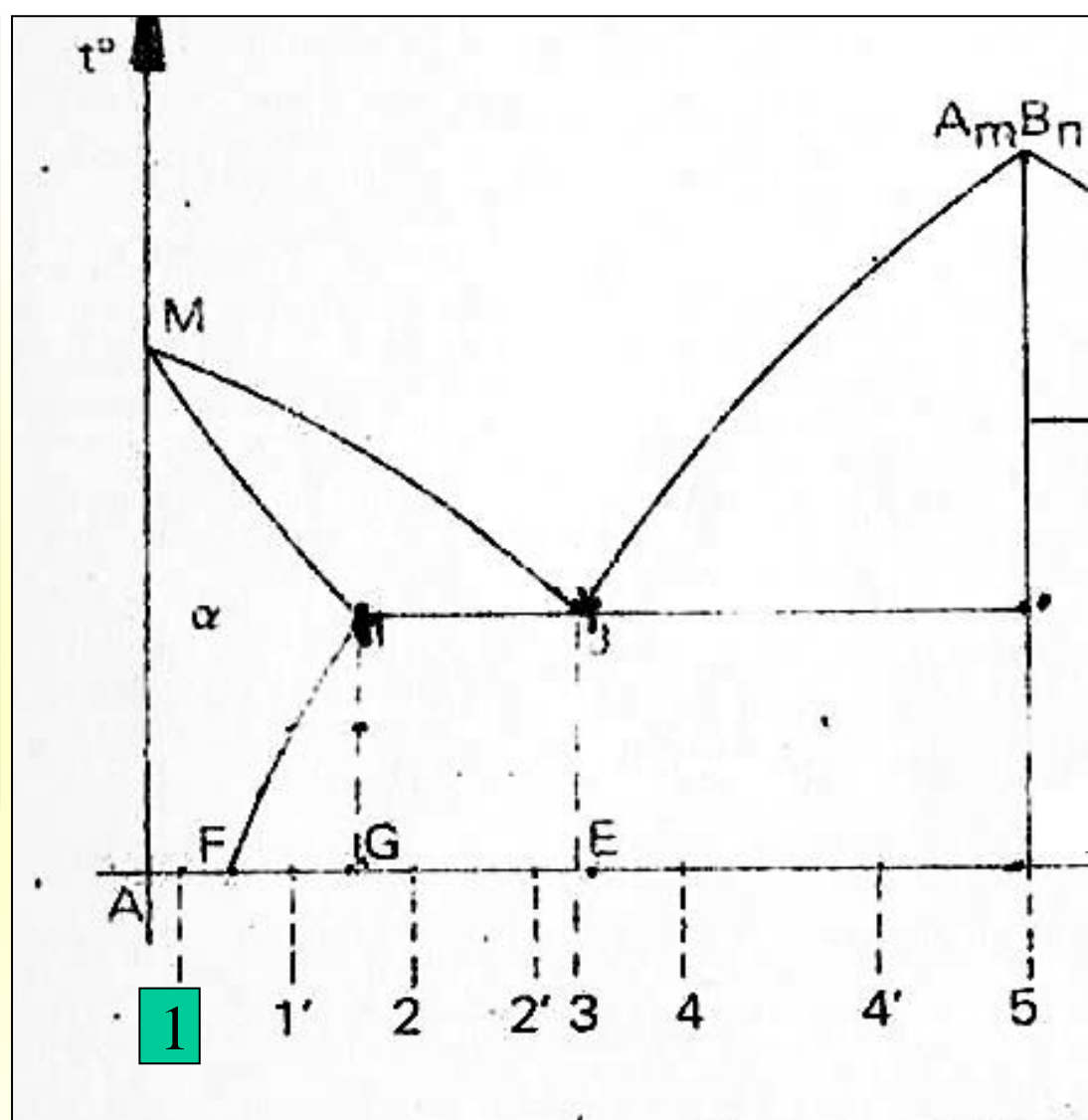
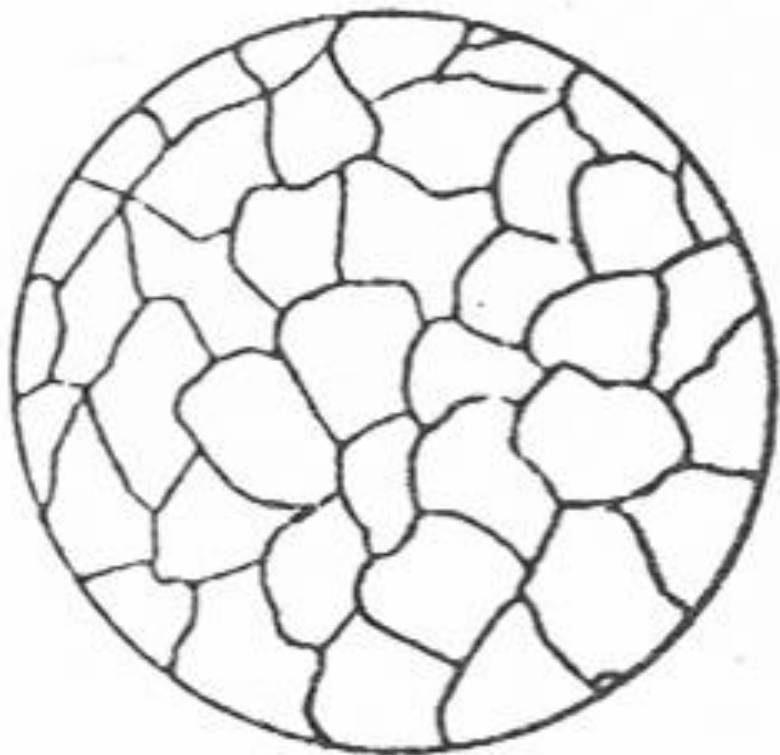
Evolución de la Microestructura de una aleación Plomo

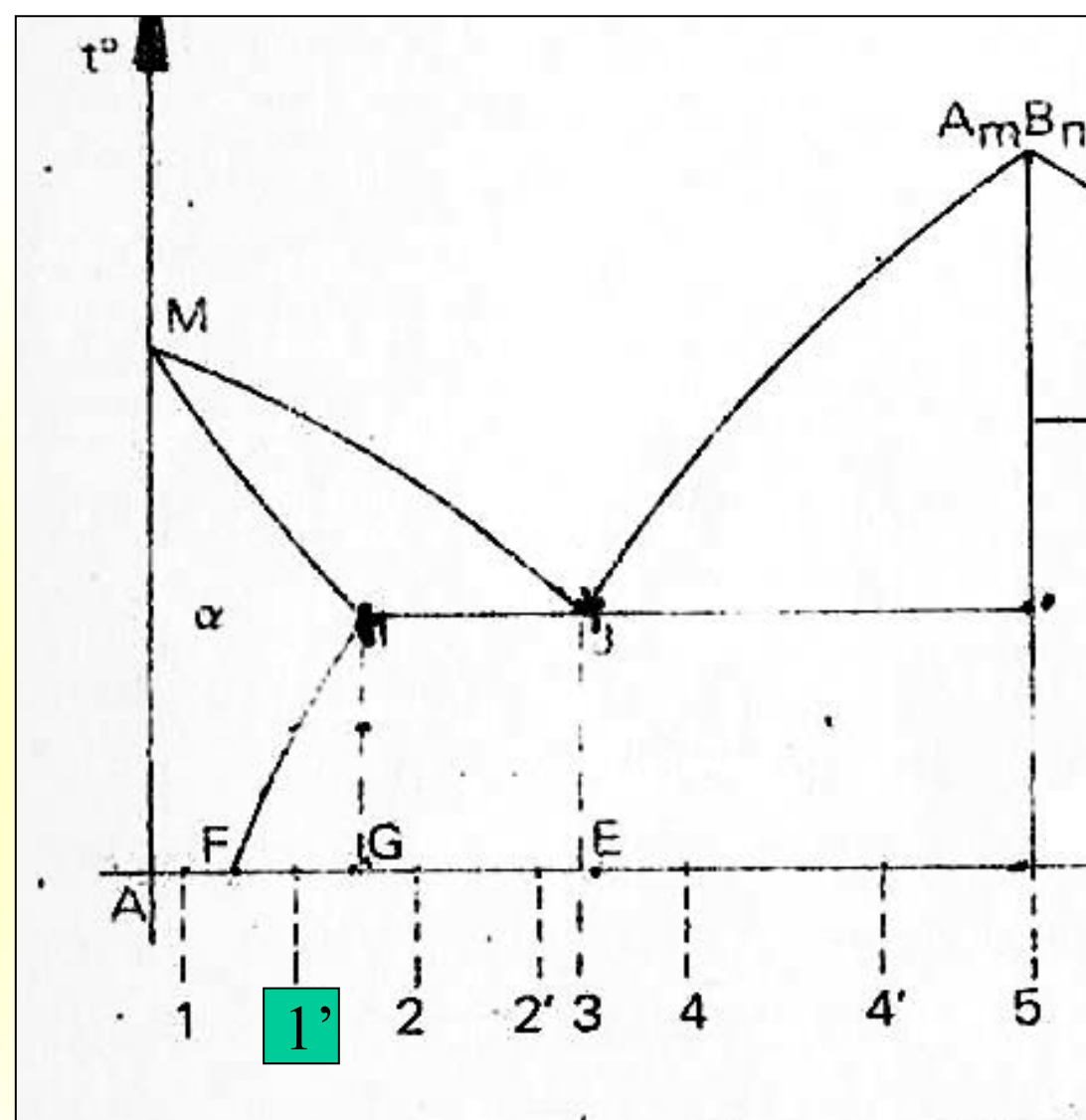
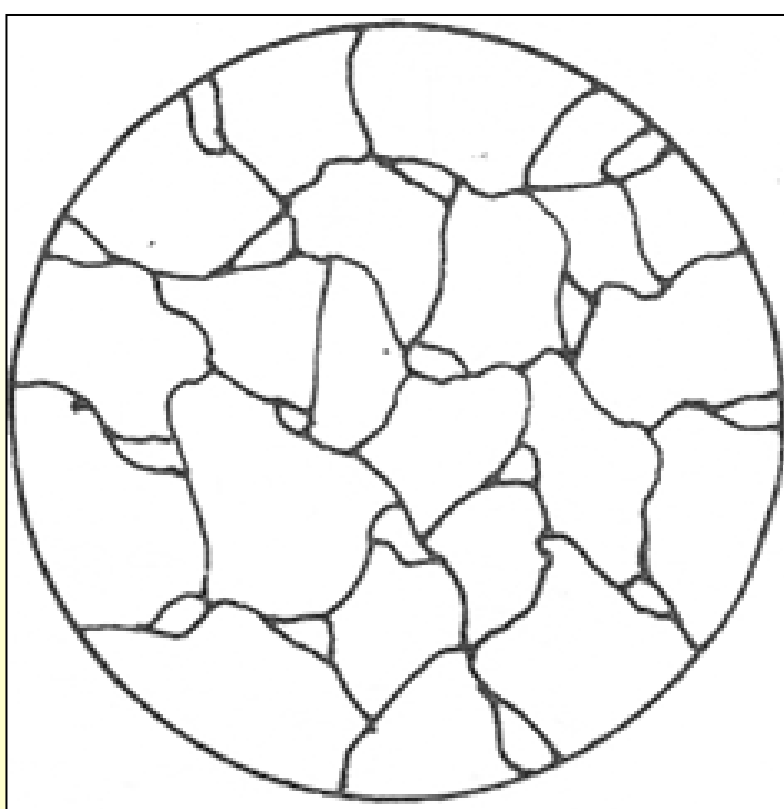
– Estaño de composición C2 durante la solidificación

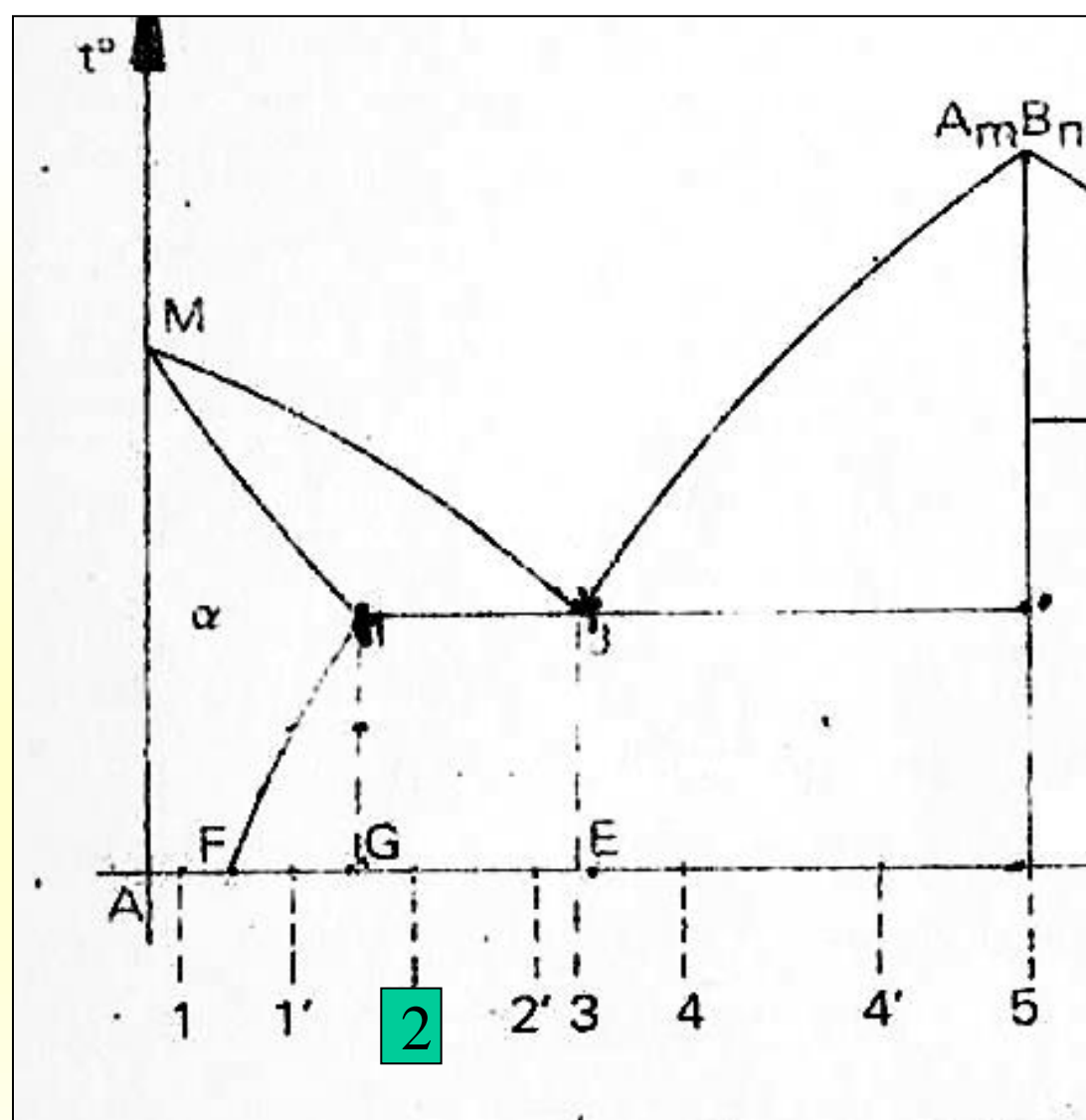
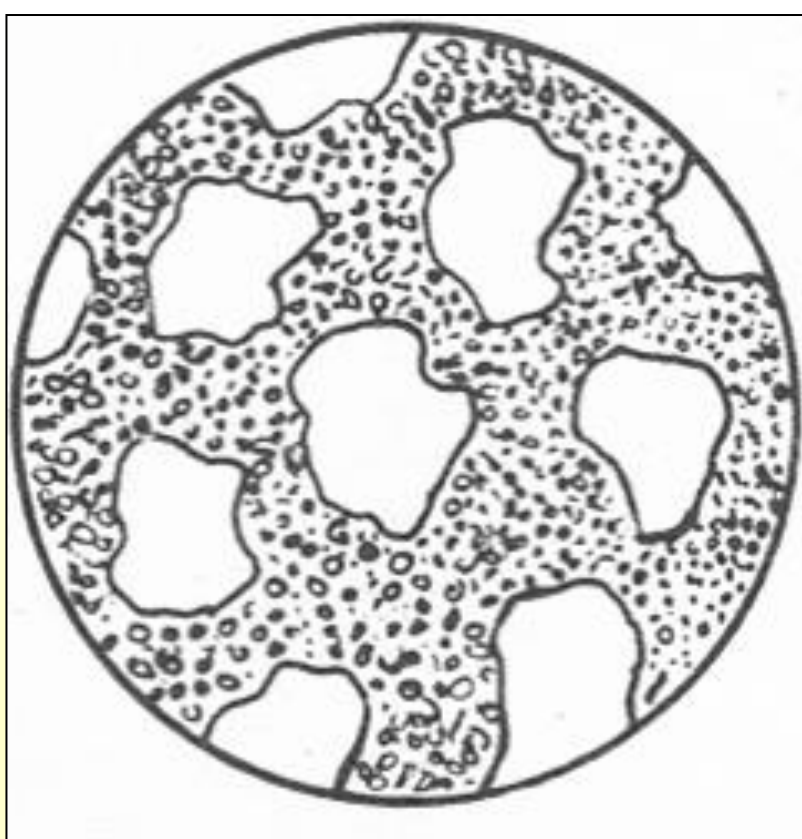


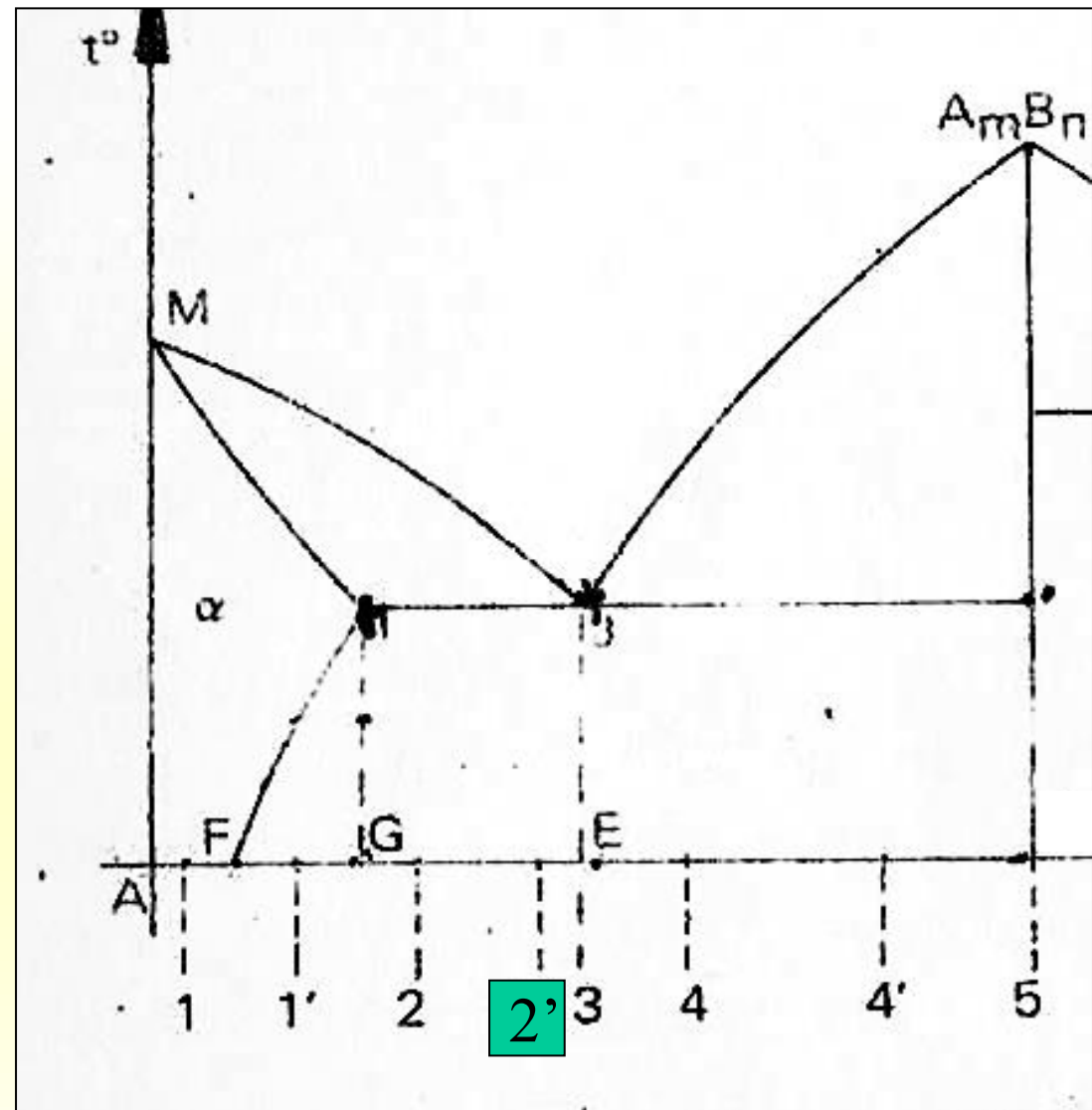
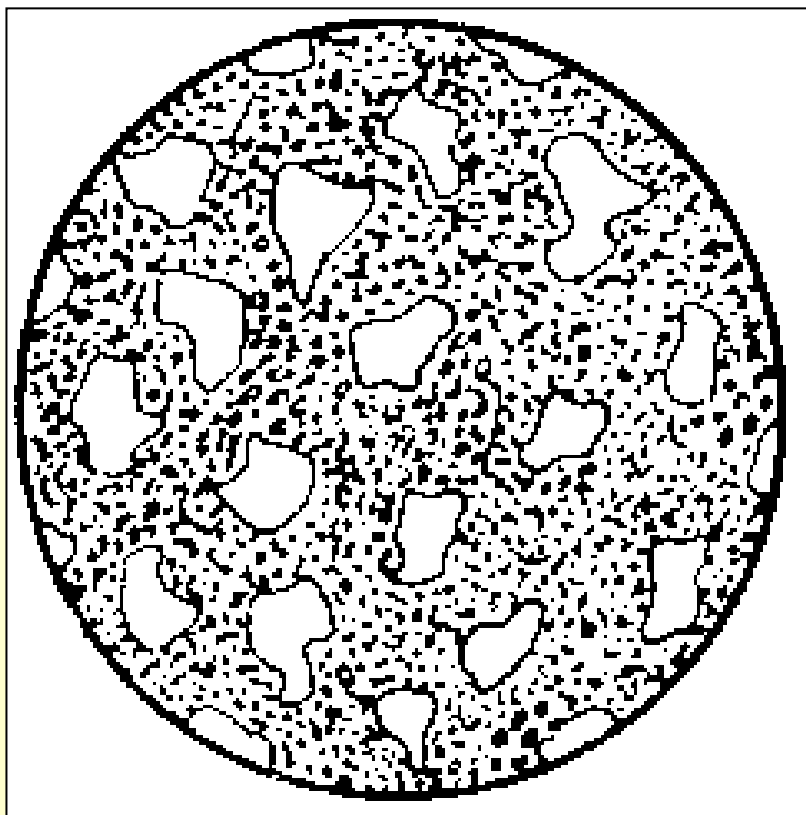
Aleación Binaria que contiene Compuesto Intermetálico

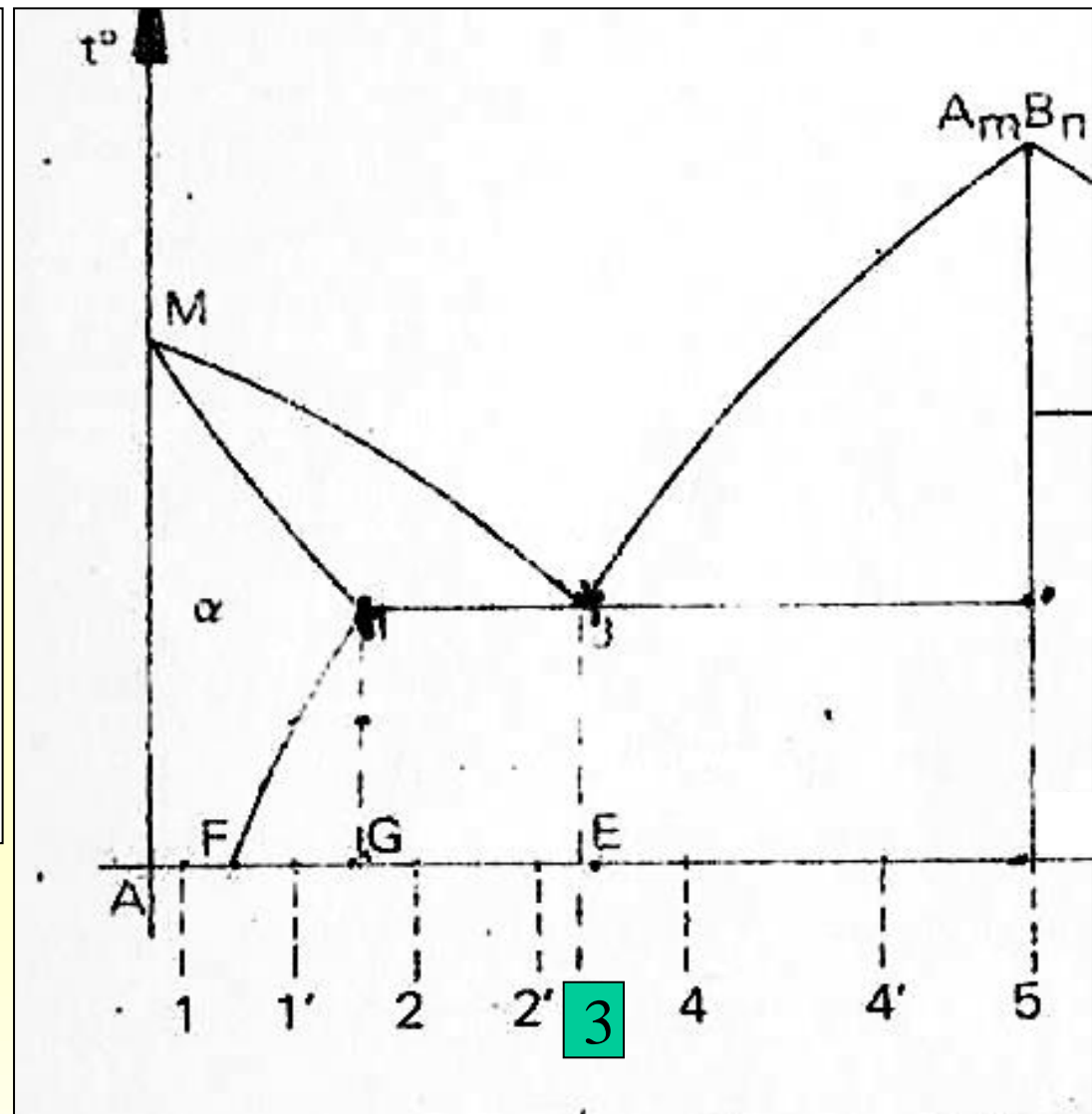
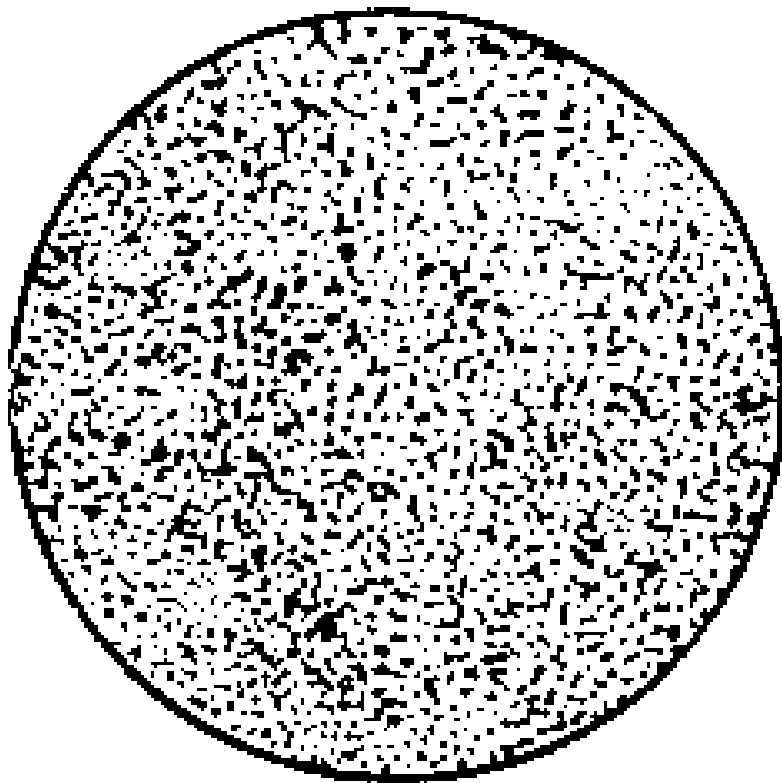


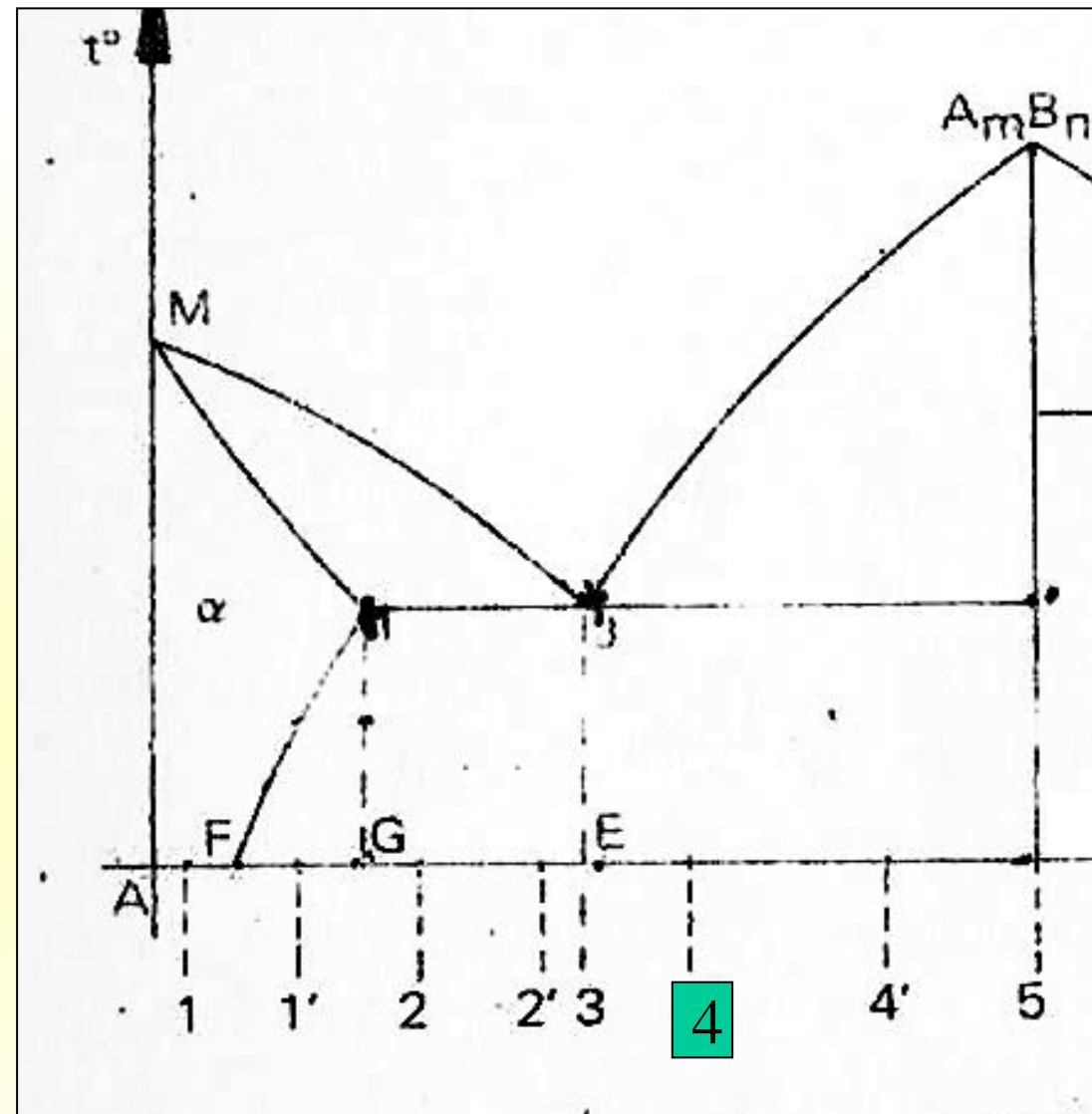
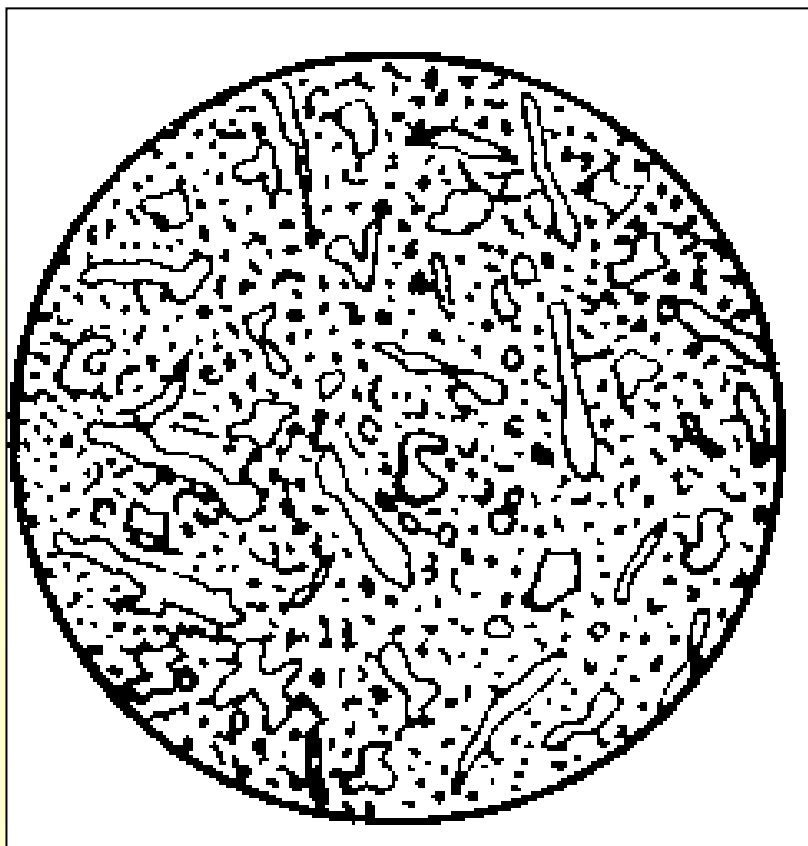


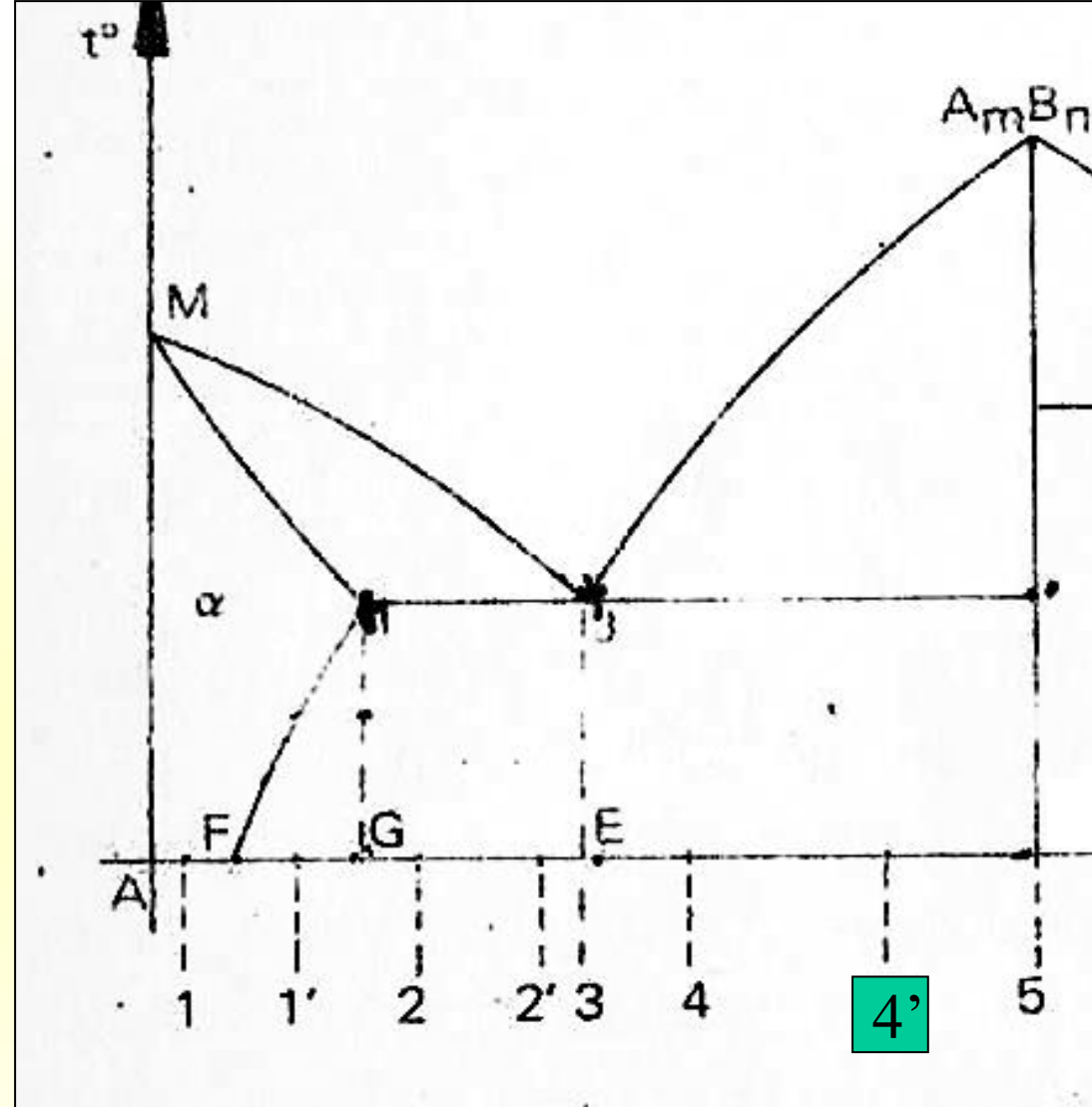
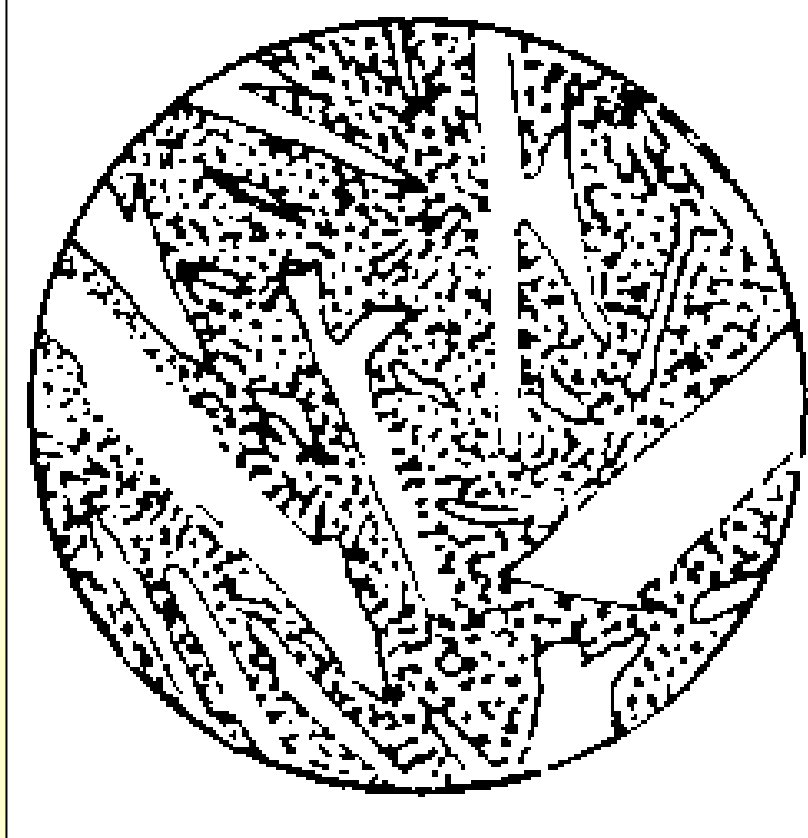












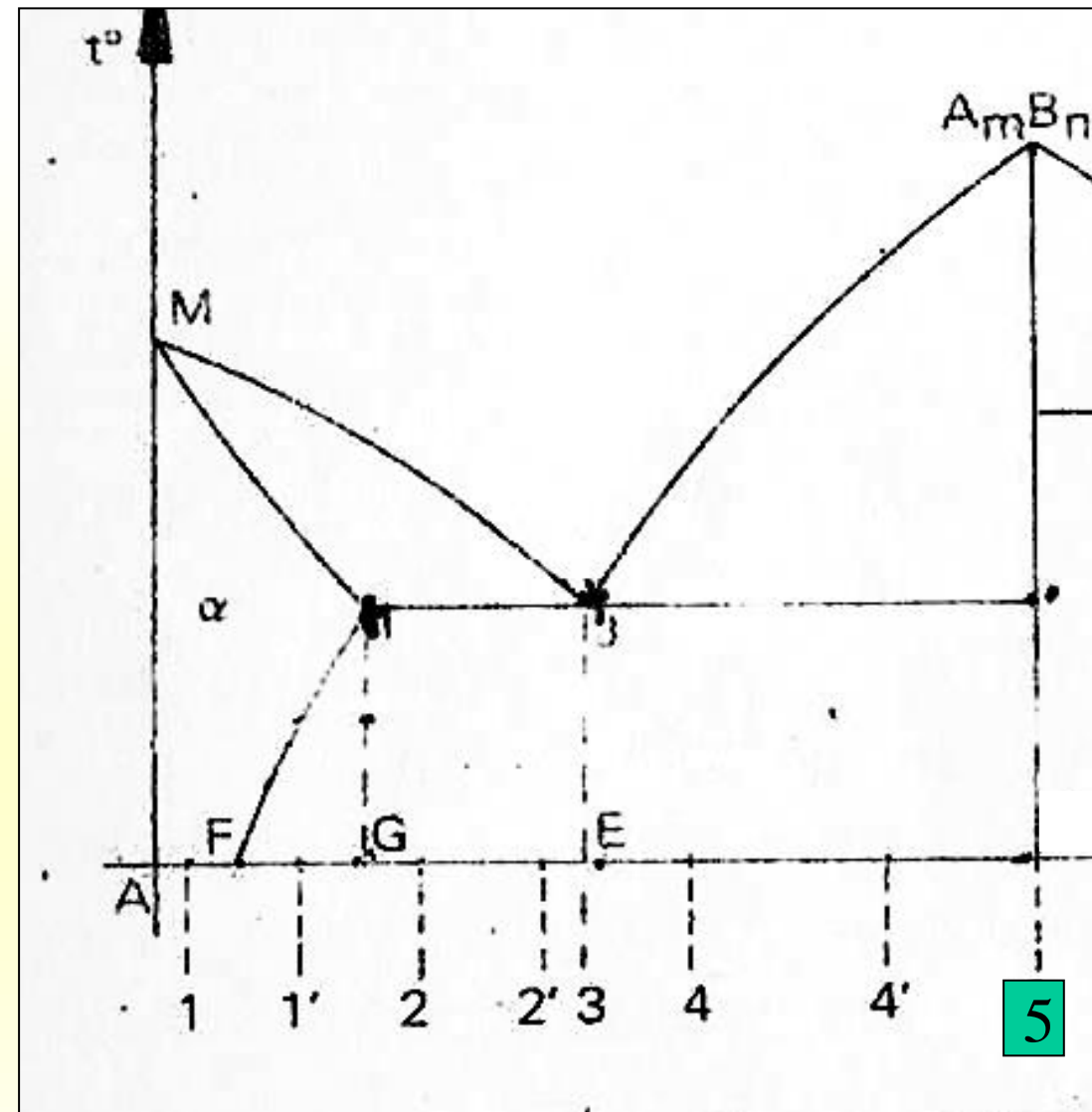
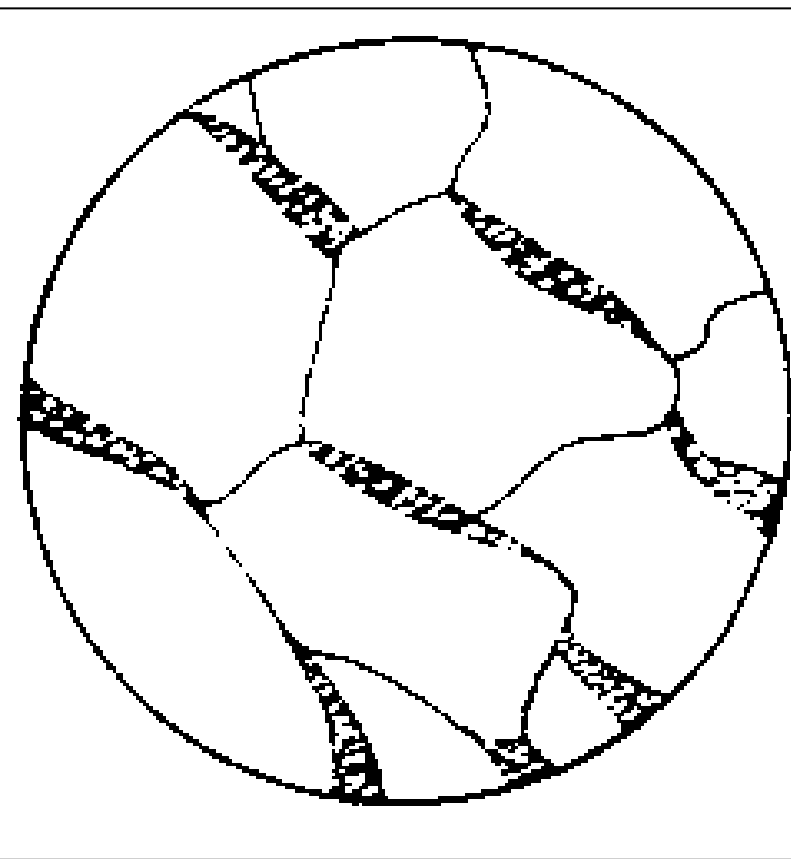


Diagrama de Equilibrio con Compuestos Intermedios

