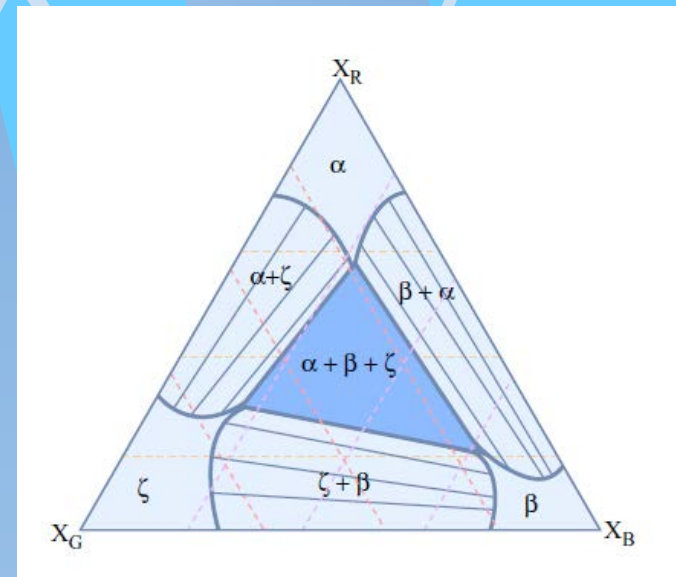
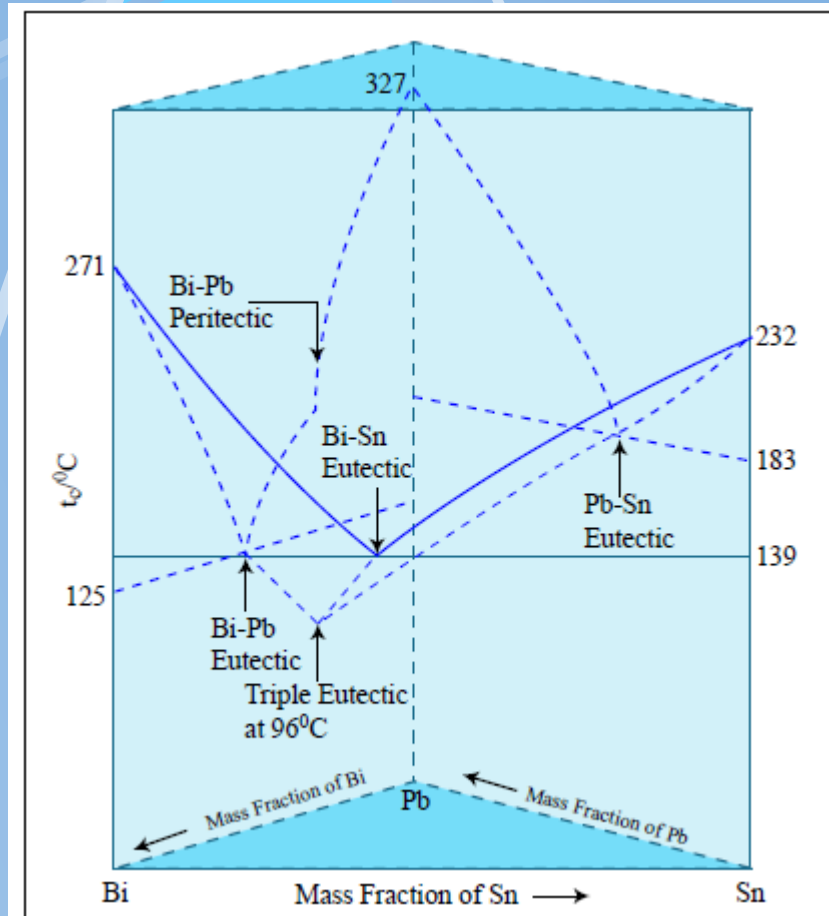


Ternární rovnováhy



Gibbsův trojúhelník

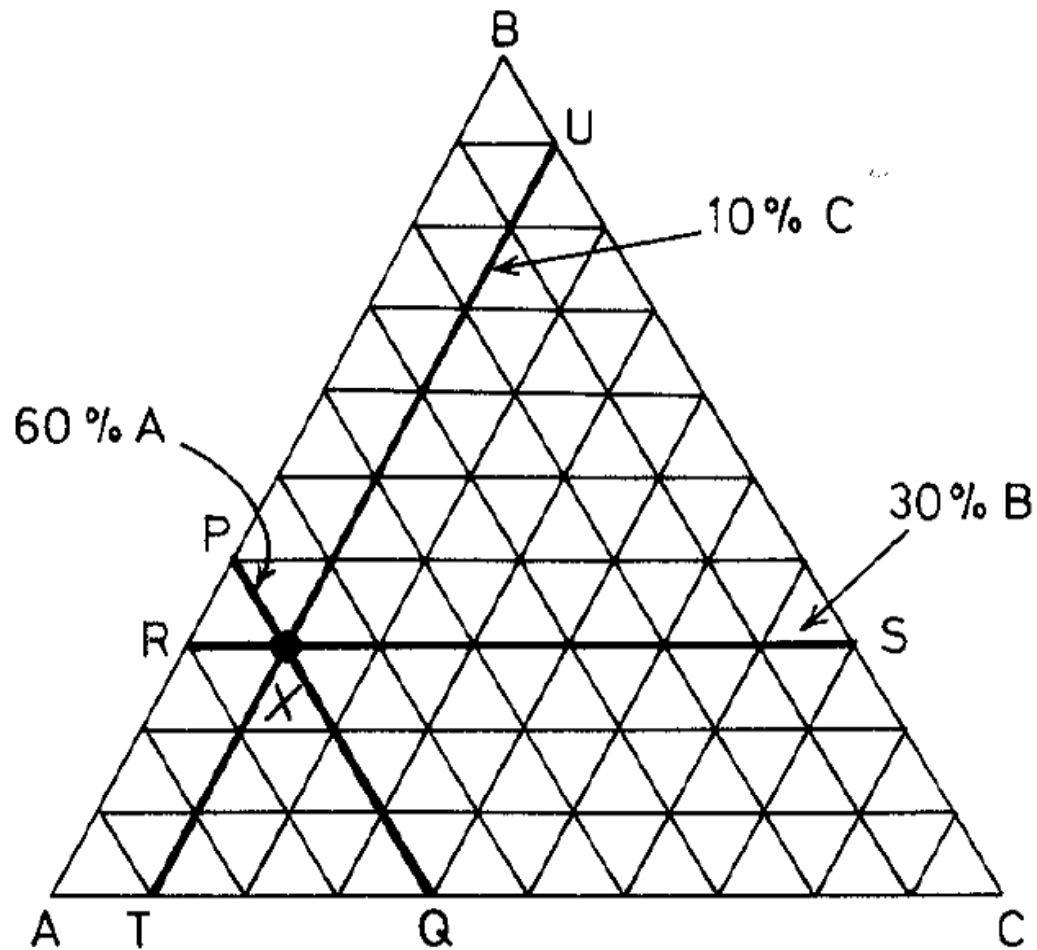


Fig. 1.40 The Gibbs triangle.

Plochy Gibbsových energií fází

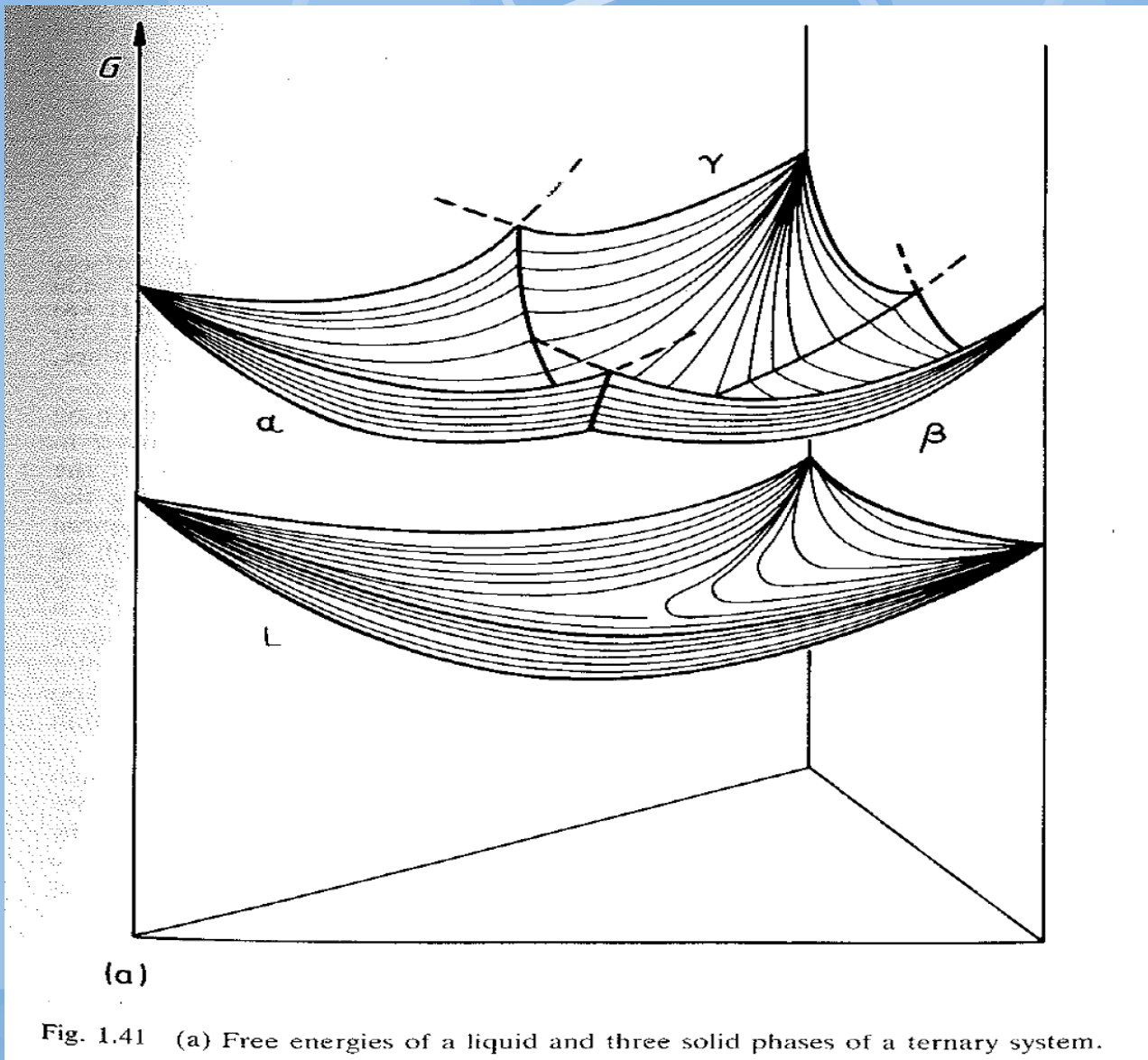
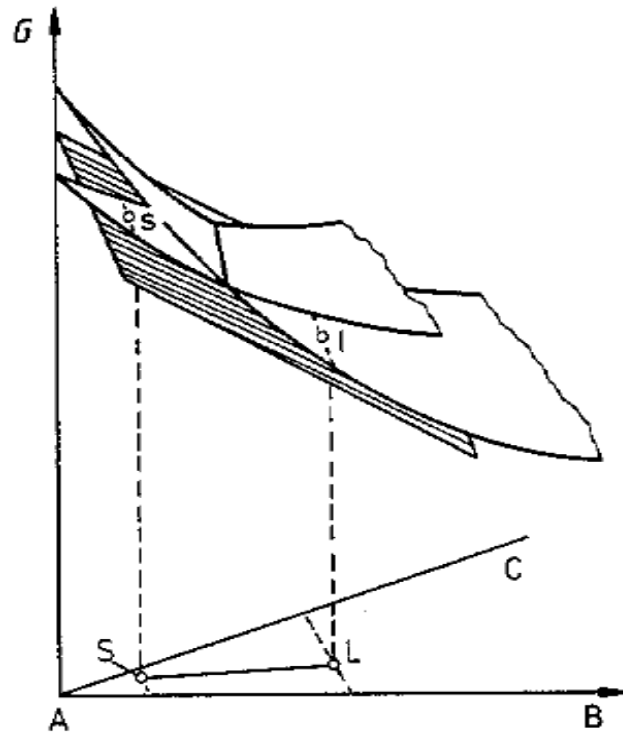


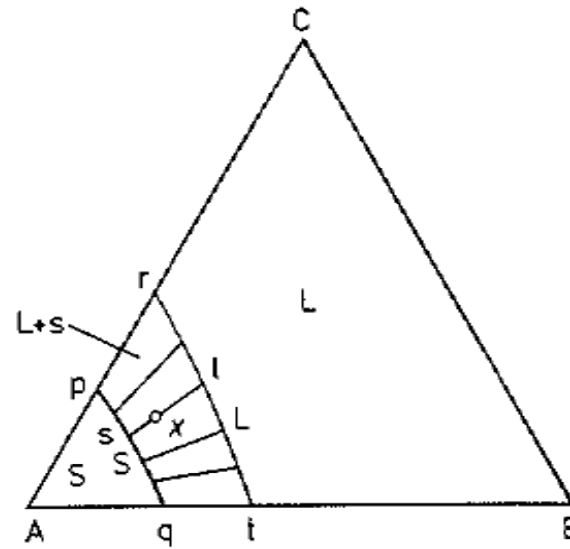
Fig. 1.41 (a) Free energies of a liquid and three solid phases of a ternary system.

U vyšších
soustav
hyperplochy

Protínání ploch Gf



(b)



(c)

Fig. 1.41 (Cont.) (b) A tangential plane construction to the free energy surfaces defines equilibrium between s and l in the ternary system. (c) Isothermal section through a ternary phase diagram obtained in this way with a two-phase region ($L+S$) and various tie-lines. The amounts of l and s at point x are determined by the lever rule. (After P. Haasen, *Physical Metallurgy*, Cambridge University Press, Cambridge, 1978.)

Vývoj FD

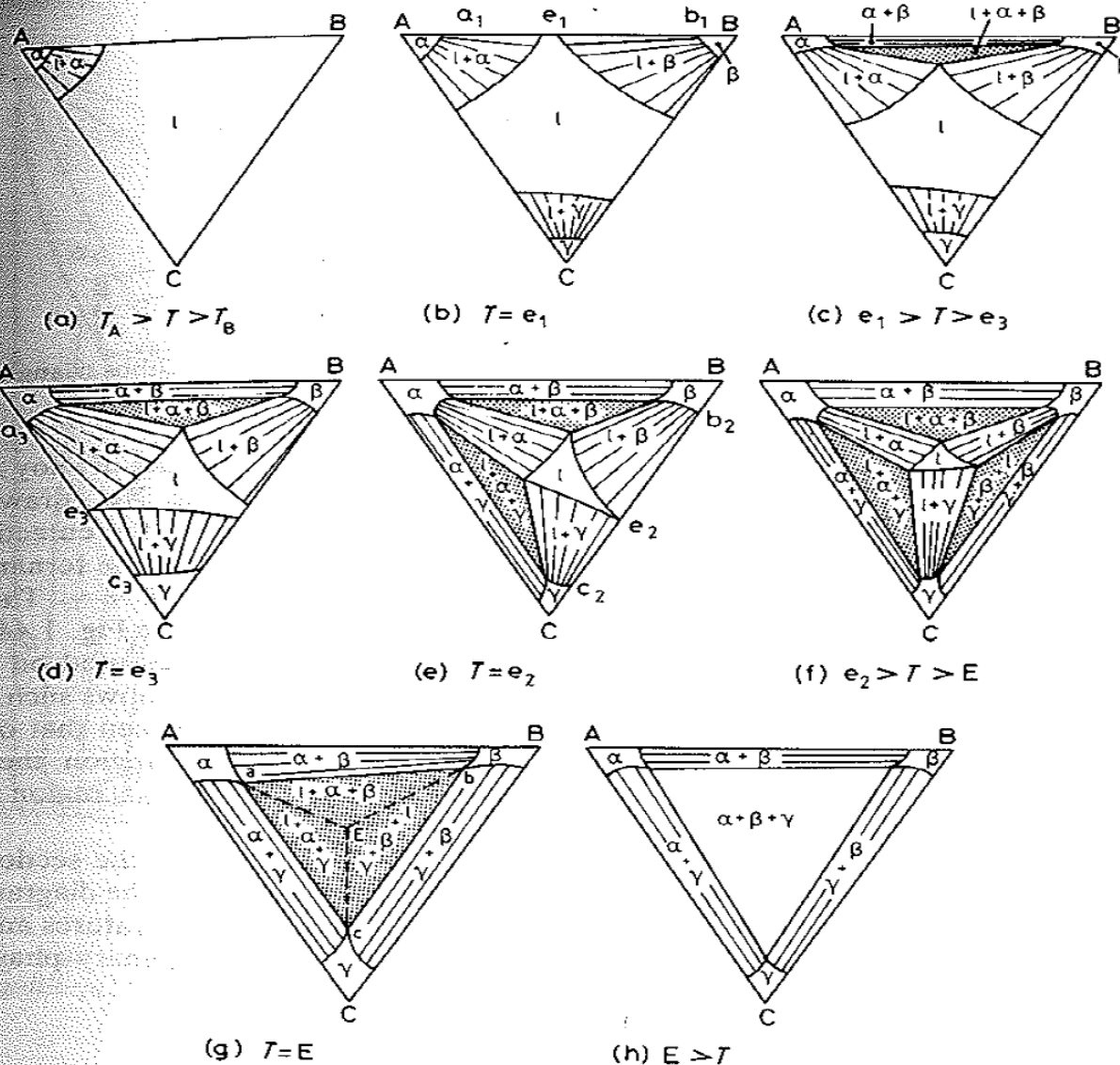


Fig. 1.42 Isothermal sections through Fig. 1.44. (After A. Prince, *Alloy Phase Equilibria*, Elsevier, Amsterdam, 1966.)

FD soustav a podsoustav

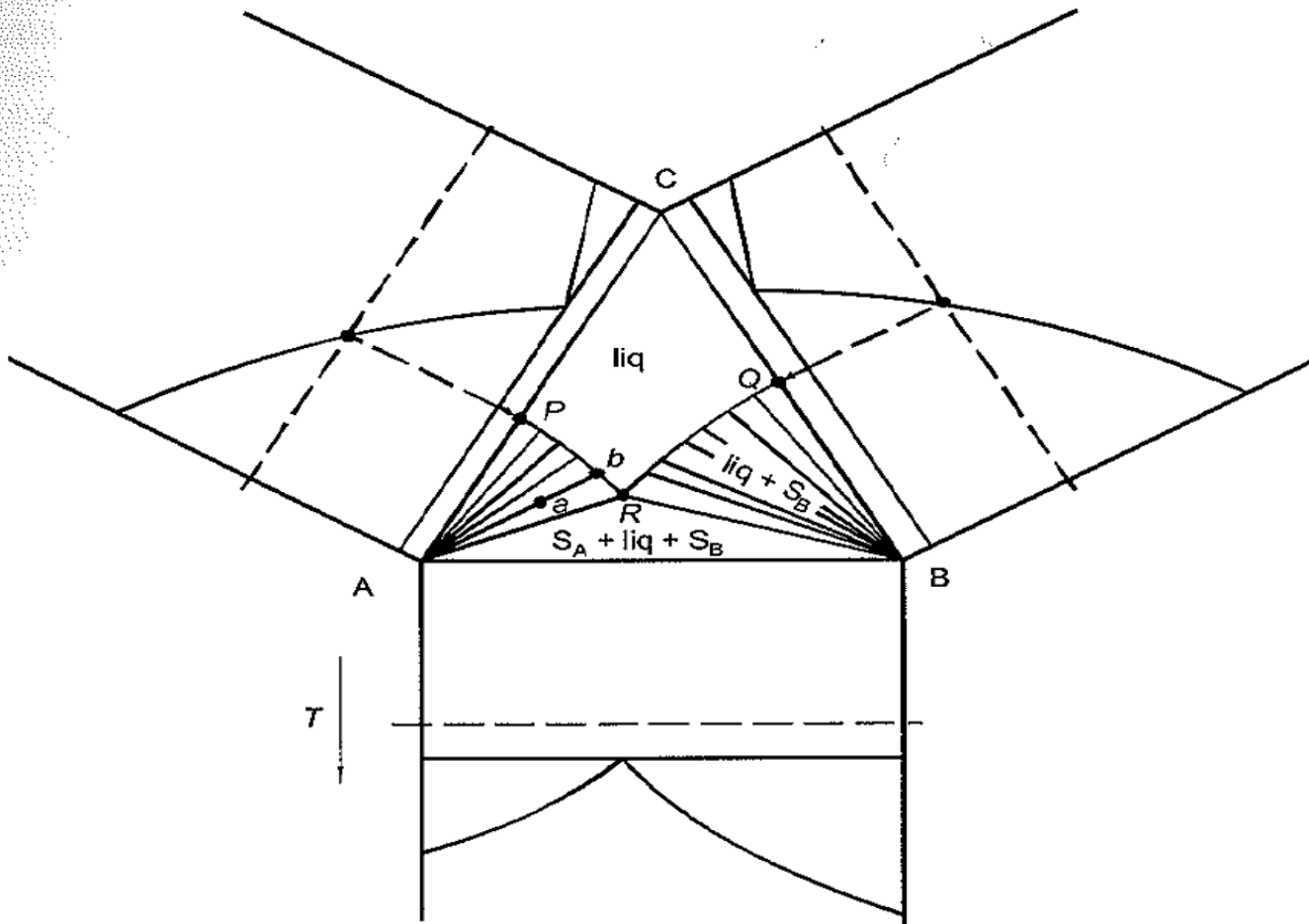


FIG. 10. Isothermal section showing the phase equilibrium relationships of a ternary system composed of three eutectic binary subsystems under isobaric circumstances

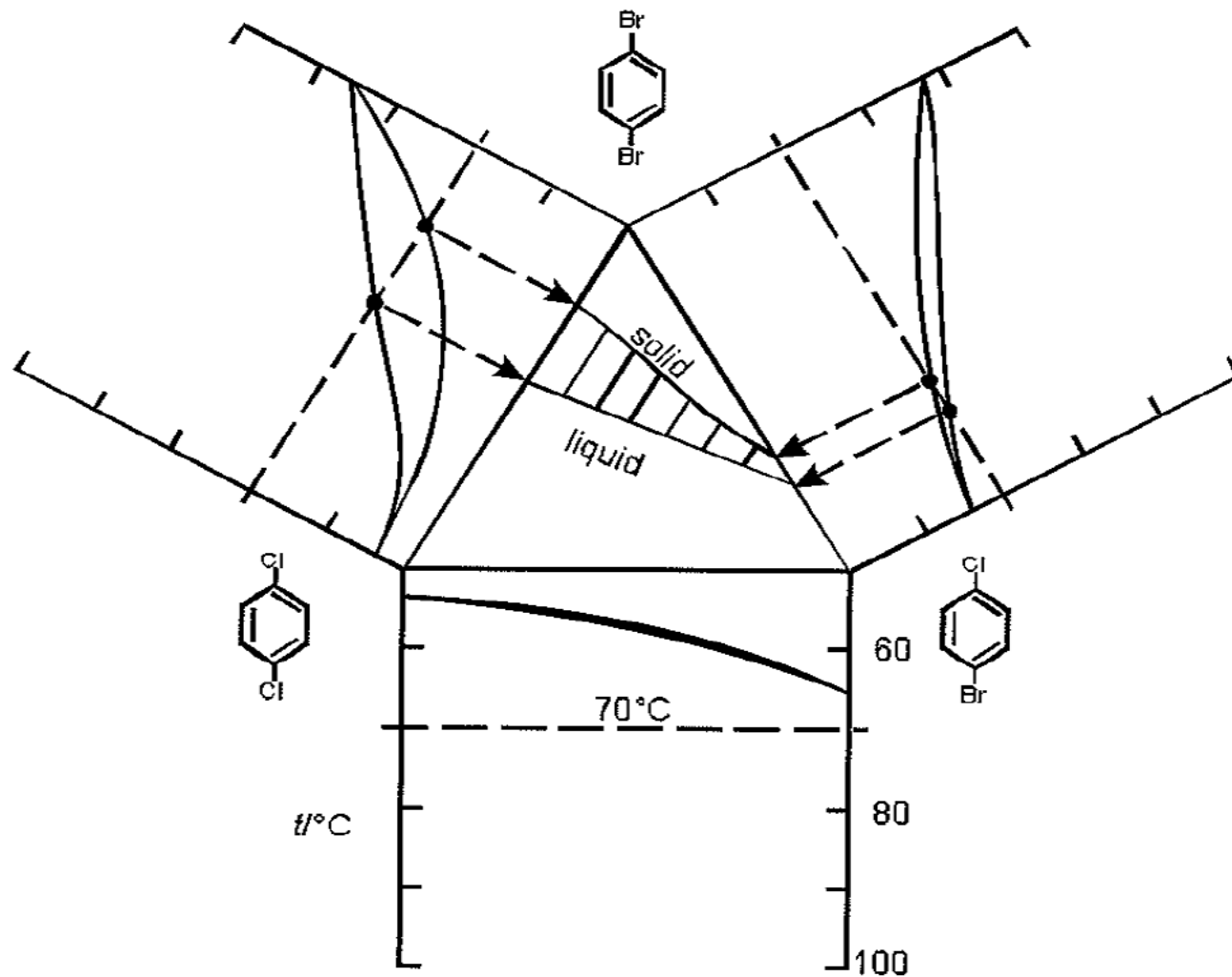


FIG. 11. Ternary system composed of three 1,4-dihalobenzenes forming mixed crystals. Isothermal section ($t = 70^\circ\text{C}$) of ternary (solid-liquid) equilibrium, calculated from the information available for the binary subsystems Moerkens et al. 1983)

Plocha liquidu

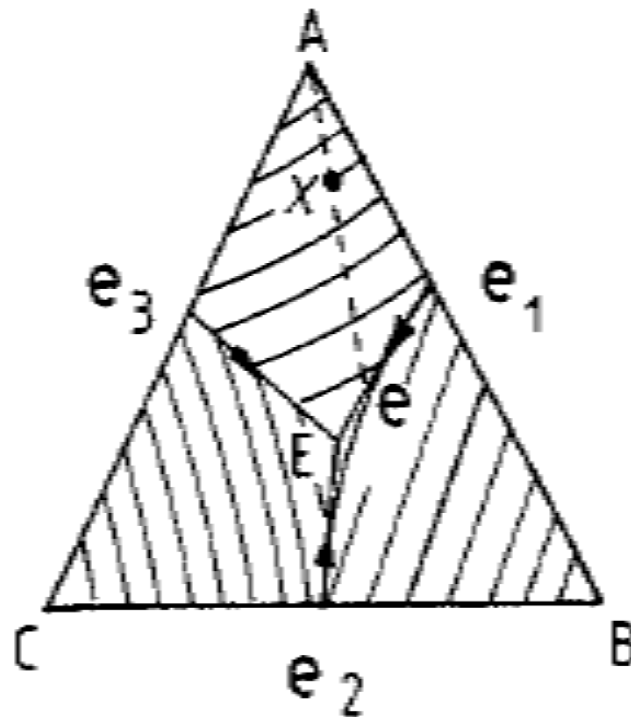


Fig. 1.43 A projection of the liquidus surfaces of Fig. 1.44 onto the Gibbs triangle.

Ternární eutektikum

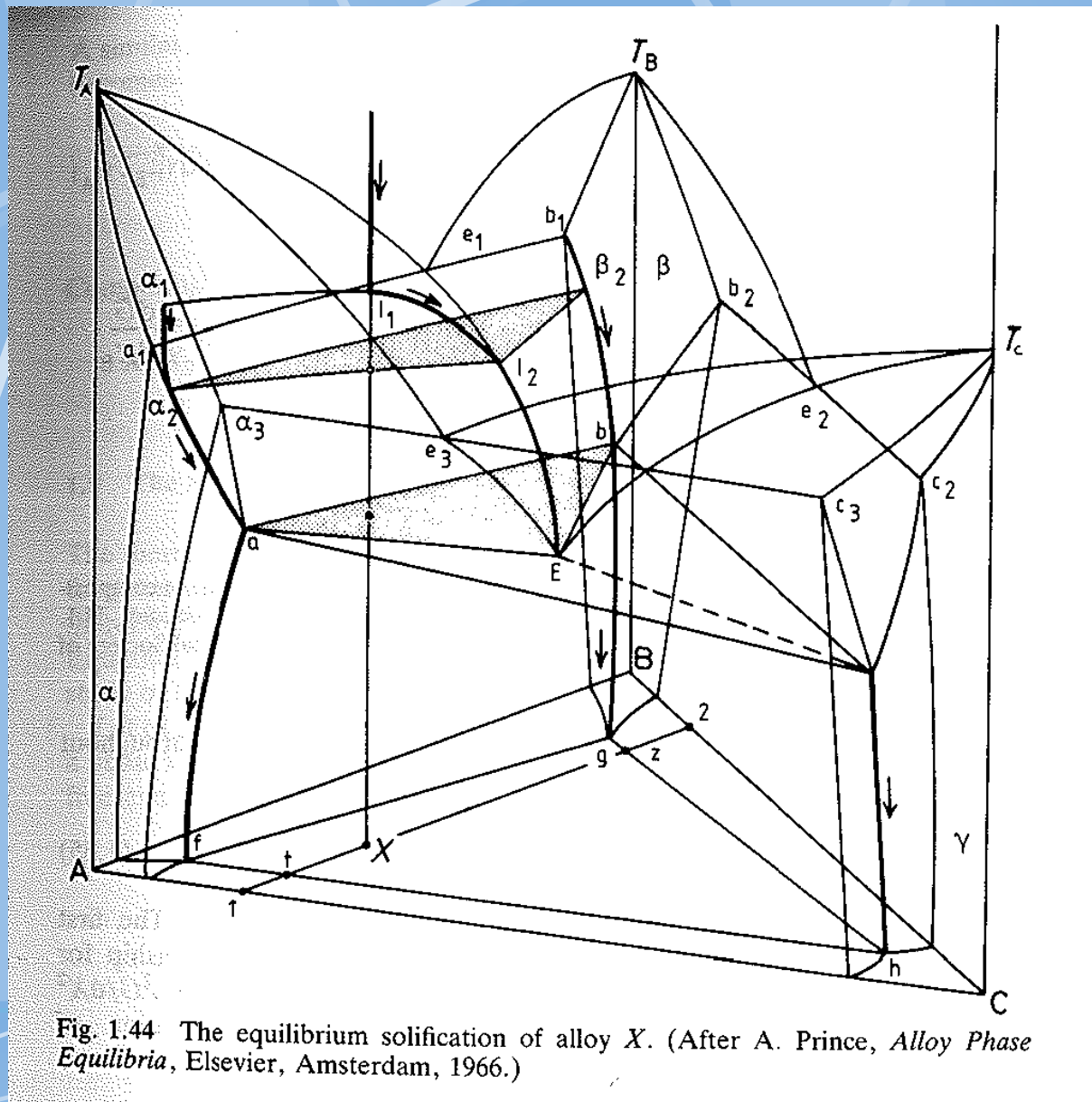


Fig. 1.44 The equilibrium solification of alloy X. (After A. Prince, *Alloy Phase Equilibria*, Elsevier, Amsterdam, 1966.)

Isokoncentrační řezy FD

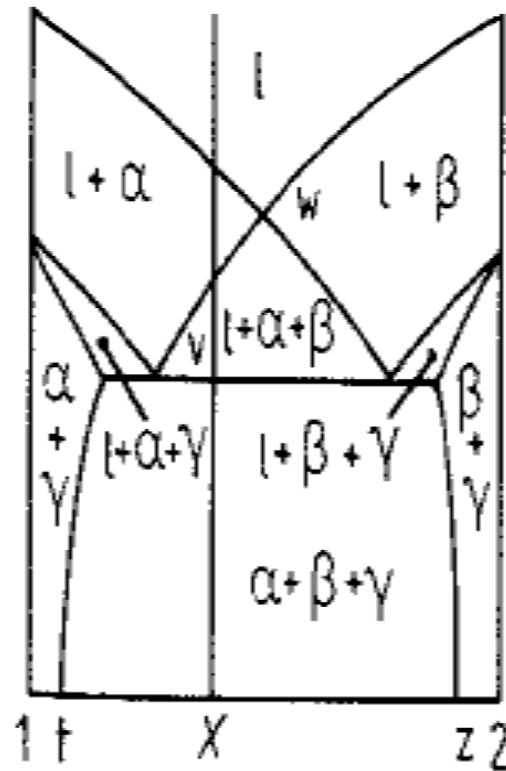


Fig. 1.45 A vertical section between points 1, 2 and X in Fig. 1.44. (After A. Prince, *Alloy Phase Equilibria*, Elsevier, Amsterdam, 1966.)

Isotermické řezy FD

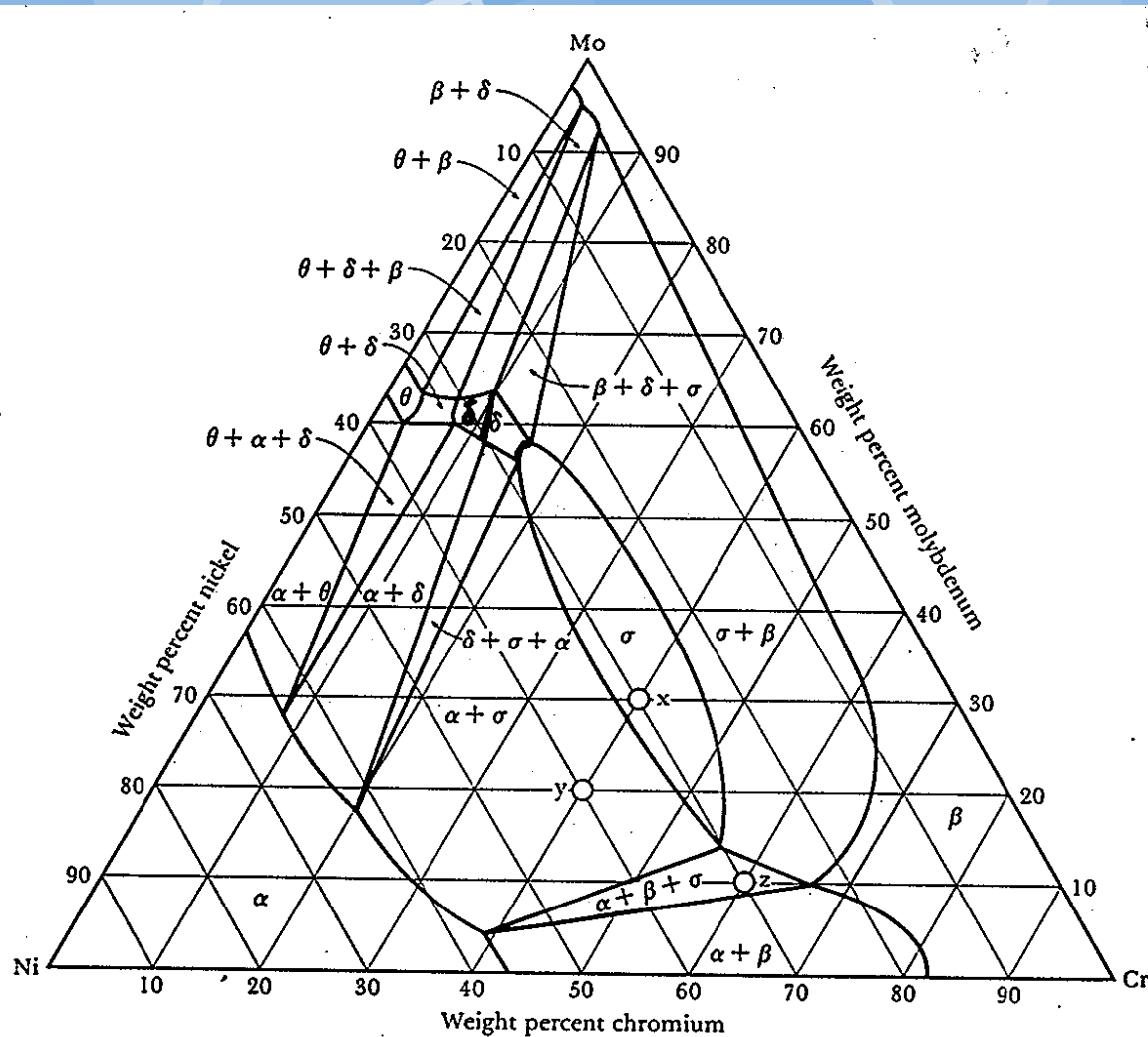
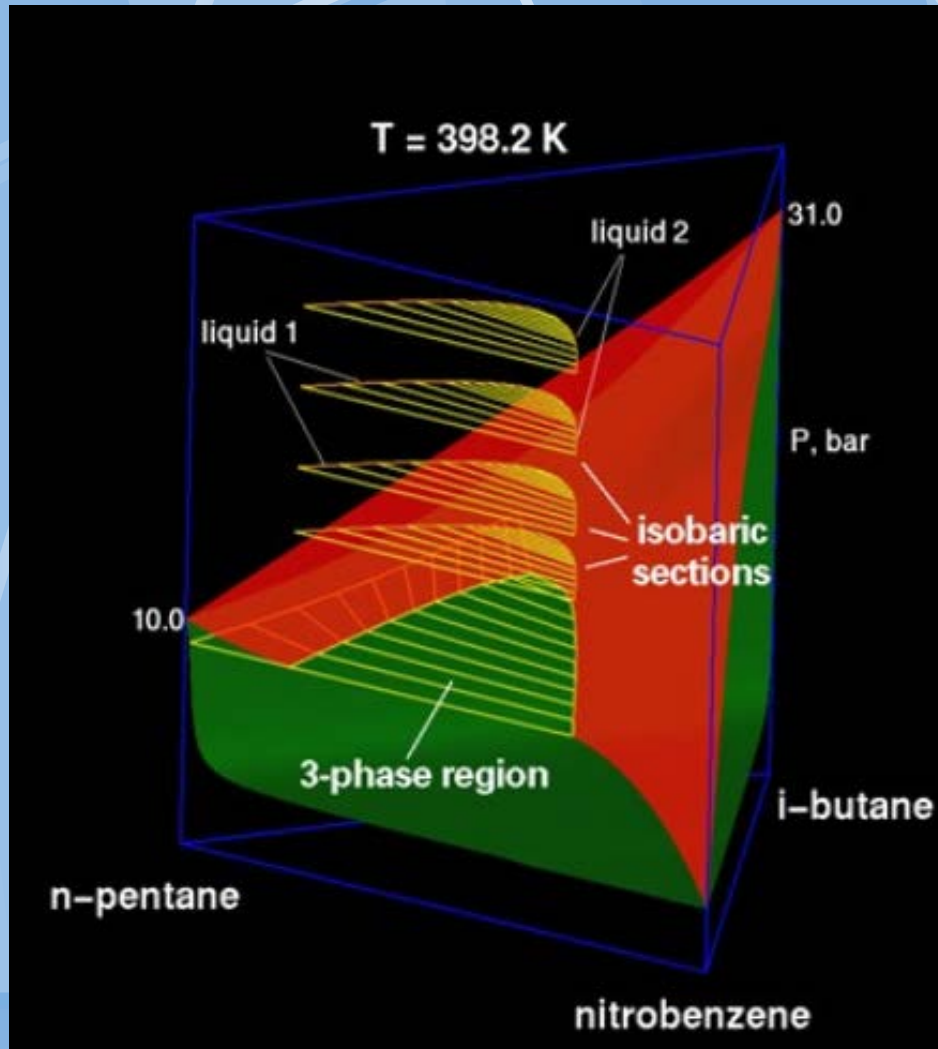


FIG. 10-26 An isothermal plot at 1250°C for the nickel-chromium-molybdenum ternary phase diagram.

T=1250stC

Jiné typy řezů:



$T = \text{konst}$

$X_a/X_b = \text{konst}$

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CHANGING THE PRESSURE

As the pressure changes within the stated limits, the bubble-point and dew-point surfaces move through the tetrahedron so as to show how the compositions of the equilibrium phases depend (isothermally) upon the pressure. By looking at an animated series of such drawings, one might get a sense of the four-dimensional pressure-composition functions $[P=f(X_A, X_B, X_C)]_{T, DP \text{ or } BP}$ that characterize these equilibria.

As the pressure falls to the vapor pressure of acetone (0.29 bar) the red and green surfaces join at the acetone vertex, and at still lower pressures they retract from that point toward the benzene vertex in the form of separate, three-sided surfaces, with binary VLE remaining along only three of the six edges.

