

Problem 7.21

A 50% Ni 50% Cu alloy is slowly cooled from 1400C to 1200C.

(This means we probably have an equilibrium process and we can rely on the phase diagram.)

(a) At what temperature does the first solid phase form?

Looks like it starts to form at 1325C.

(b) What is the composition of this solid phase?

Cross the tie-line over to the solidus. Looks like about 64%.

(c) At what temperature does the liquid solidify?

Last liquid solidifies at around 1270C.

(d) What is the composition of this last remaining liquid?

Again follow the tieline over to the liquidus. Looks like about 40%.