

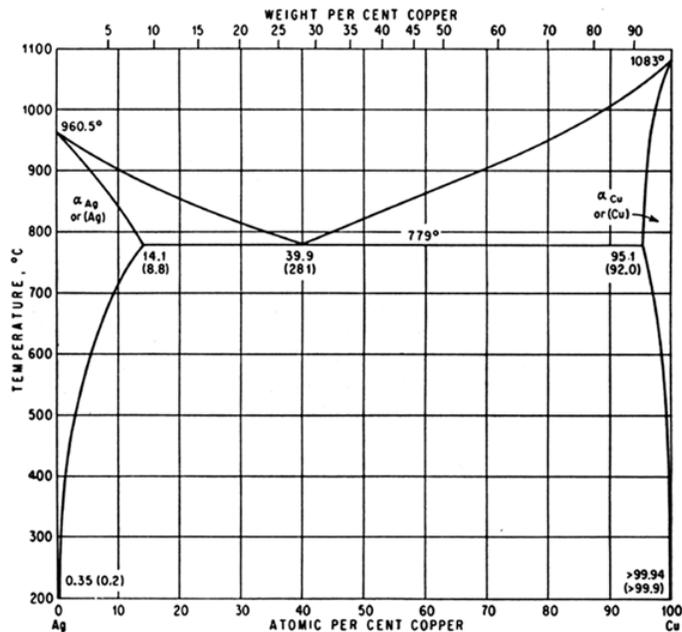
Session #35: Homework Problems

Problem #1

(a) For each of the following Ag-Cu alloys state all phases present at the specified compositions and temperatures. Phase diagram given below.

- (i) $c = 20$ atomic per cent Cu, $T = 900^\circ\text{C}$
- (ii) $c = 20$ atomic per cent Cu, $T = 800^\circ\text{C}$
- (iii) $c = 20$ atomic per cent Cu, $T = 700^\circ\text{C}$
- (iv) $c = 5$ atomic per cent Cu, $T = 700^\circ\text{C}$
- (v) $c = 80$ atomic per cent Cu, $T = 800^\circ\text{C}$

(b) For the Ag-Cu alloy, $c = 70$ atomic per cent copper, calculate the relative amounts of all phases present at $T = 600^\circ\text{C}$.



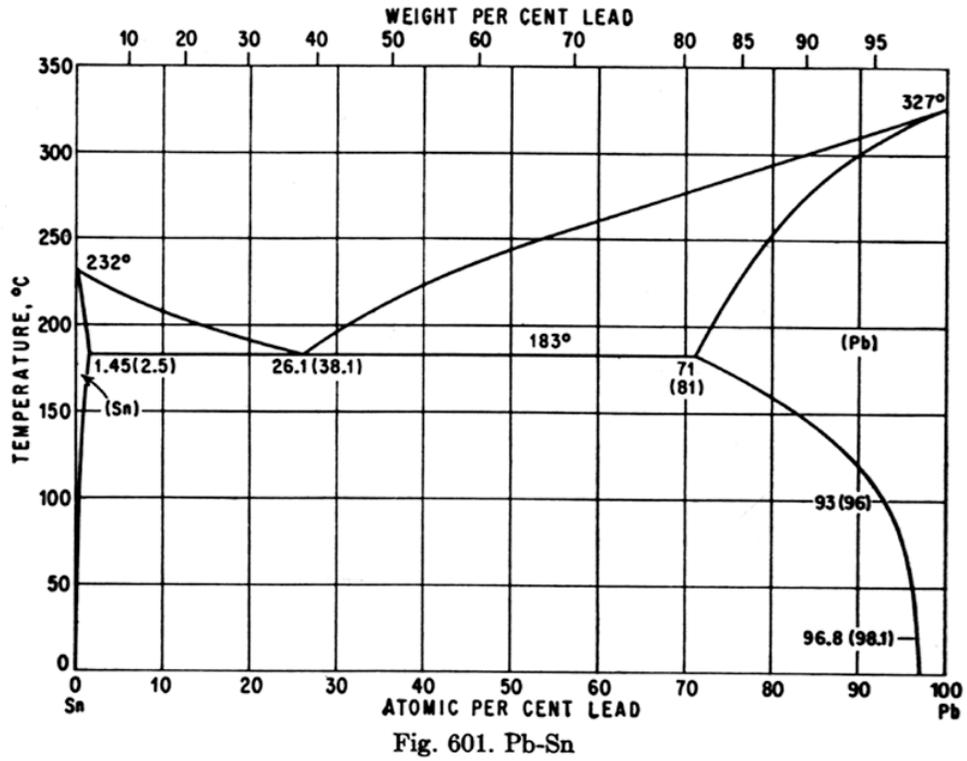
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Problem #2

(a) For each of the following Pb-Sn alloys state all phases present at the specified compositions and temperatures. Phase diagram given on the following page.

- (i) $c = 10$ atomic per cent Pb, $T = 300^\circ\text{C}$
- (ii) $c = 10$ atomic per cent Pb, $T = 200^\circ\text{C}$
- (iii) $c = 10$ atomic per cent Pb, $T = 100^\circ\text{C}$
- (iv) $c = 90$ atomic per cent Pb, $T = 200^\circ\text{C}$
- (v) $c = 60$ atomic per cent Pb, $T = 200^\circ\text{C}$

- (b) For the Pb-Sn alloy, $c = 60$ atomic per cent lead, calculate the relative amounts of all phases present at $T = 200^\circ\text{C}$.



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