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Matéria: ICMat

Gabarito lista de exercícios – Diagrama de Fases

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1. $(a) T \approx 1340^{o} C; (b) C_L = 59\%\ p\ Ni; (c) w_\alpha = 55\%, w_L = 45\%.$

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2. $(a) w_\alpha = 100\%$ (somente fase α);
   $(b) w_L = 47\%; w_\beta = 53\%;$
   $(c) w_\beta = 43\%; w_\gamma = 57\%;$
   $(d) w_\alpha = 100\%$ (somente fase α);
   $(e) w_L = 92\%; w_{Mg_2Pb} = 8\%;$
   $(f) w_\alpha = 38\%; w_L = 62\%.$

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3. $(a) \alpha: C_\alpha = 8\%\ p\ Sn + 92\%\ p\ Pb;$
   $(b) \Delta T = 50^{o} C;$
   $(c) w_\alpha = 83\%; w_L = 17\%;$
   $(d) w_\alpha = 100\%;$
   $(e) w_\alpha = 86{,}45\%; w_\beta = 13{,}55\%.$

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4. $C = 56{,}15\%\ p\ Sn - 43{,}85\%\ p\ Pb$. A liga é hipoeutética.

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5. $C = 51{,}8\%\ p\ Sn$.

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6. $w_\alpha = 89\%; w_{Fe_3}C = 11\%$.

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7. $C_0 = 0{,}42\%\ p\ C$.

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8. A fase proeutetótide será a cementita Fe_3C, pois $C_0 > 0{,}76$.

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9. $w_{Fe_3C'} = 0{,}04; w_{Fe_3C''} = 0{,}106$. $w_{Fe_3C''}$ é a cementita eutetóide.

10. (a) A fase proeutetótide será Fe_3C, pois $\% > 0{,}76\% pC$;
$(b) m_{\alpha} = 0{,}83 kg ; m_{Fe_3C} = 0{,}17 kg$;
$(c) m_{perlita} = 0{,}93 kg ; m_{Fe_3C\ proeutetóide} = 0{,}07 kg$;
(d) Desenho esquemático teórico.