

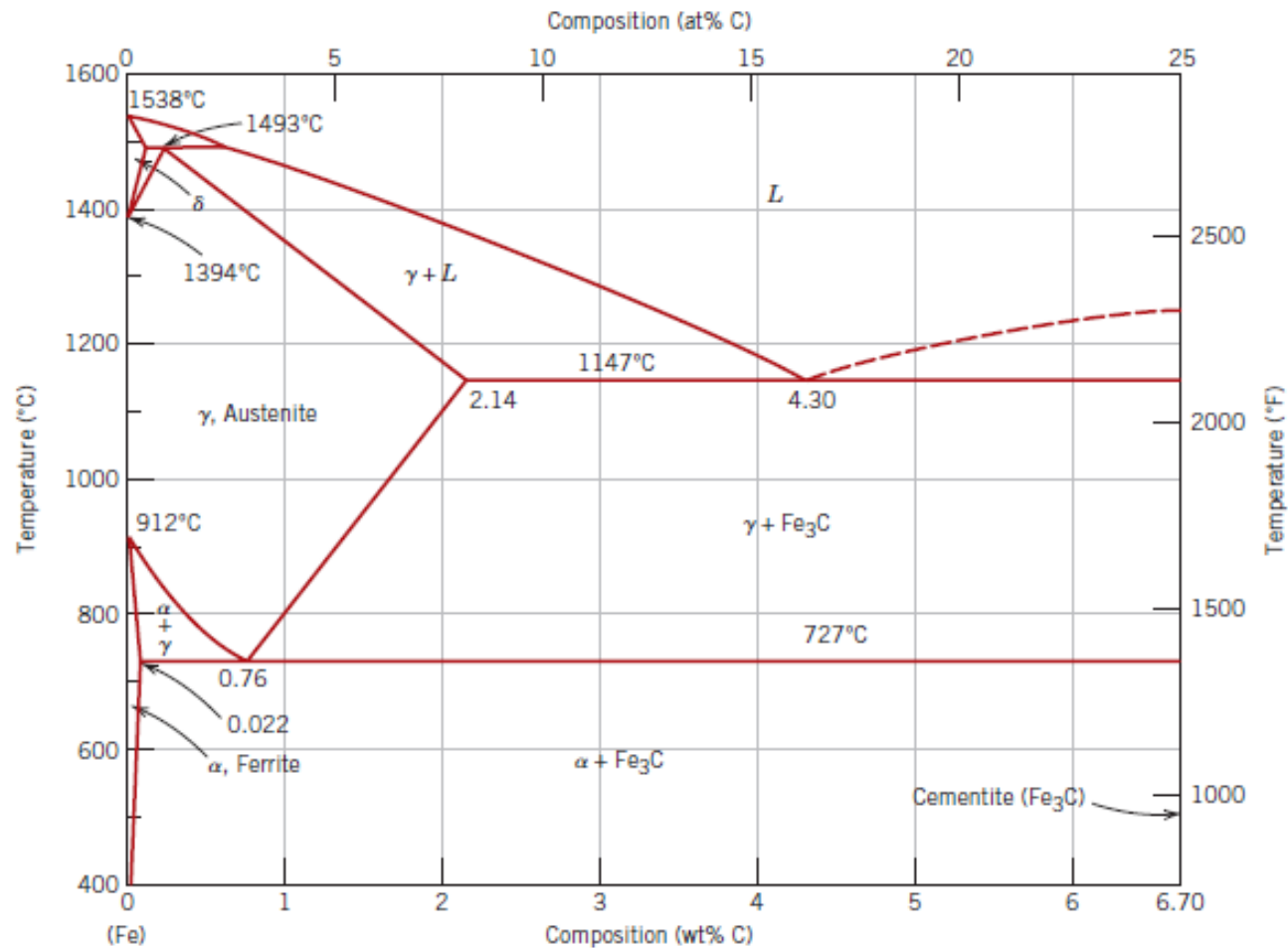


07

MATERIAIS DE CONSTRUÇÃO MECÂNICA

Engenharia Mecânica
Prof. Luis Fernando Maffei

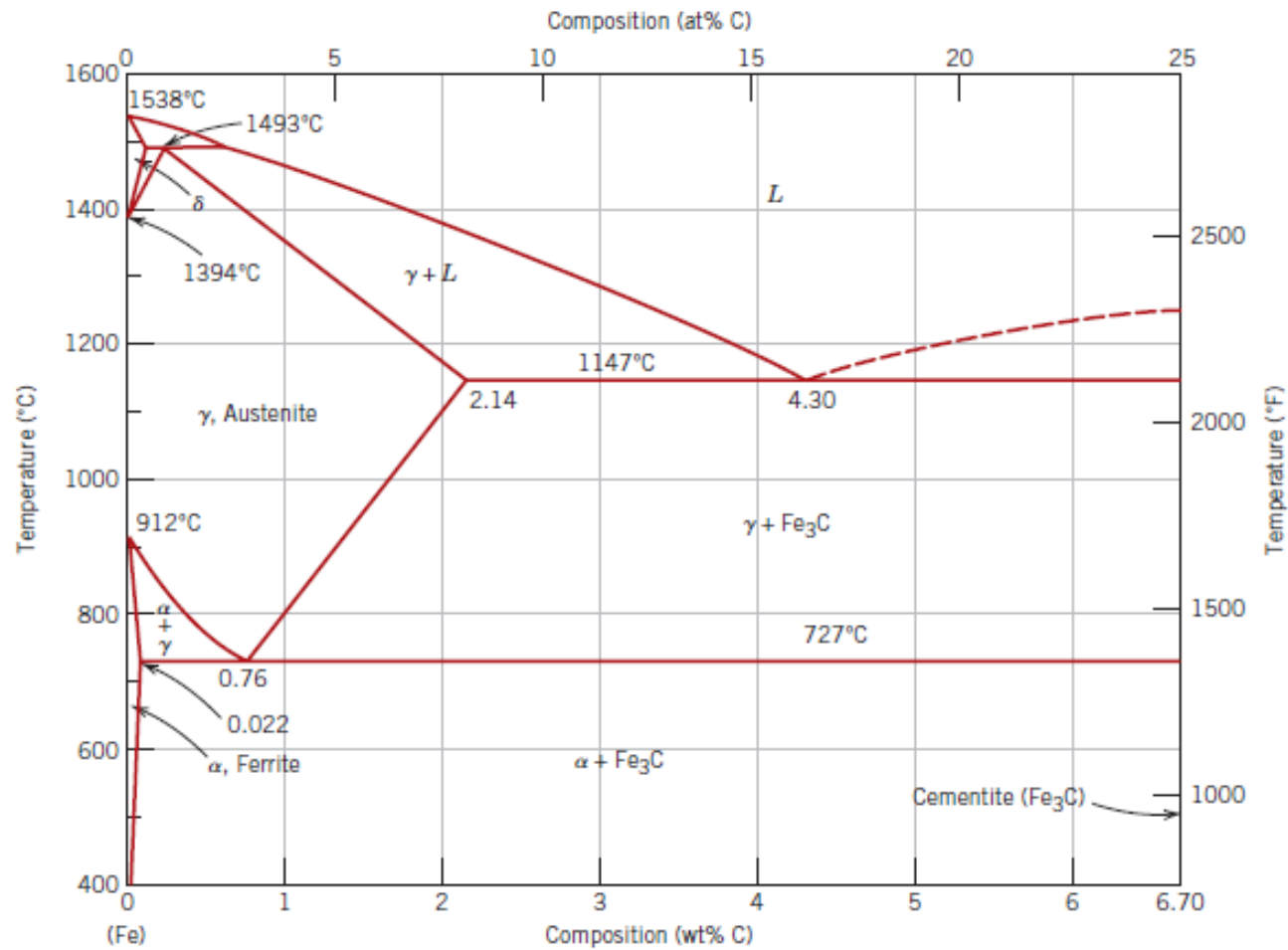
Diagramas Fe-Fe₃C



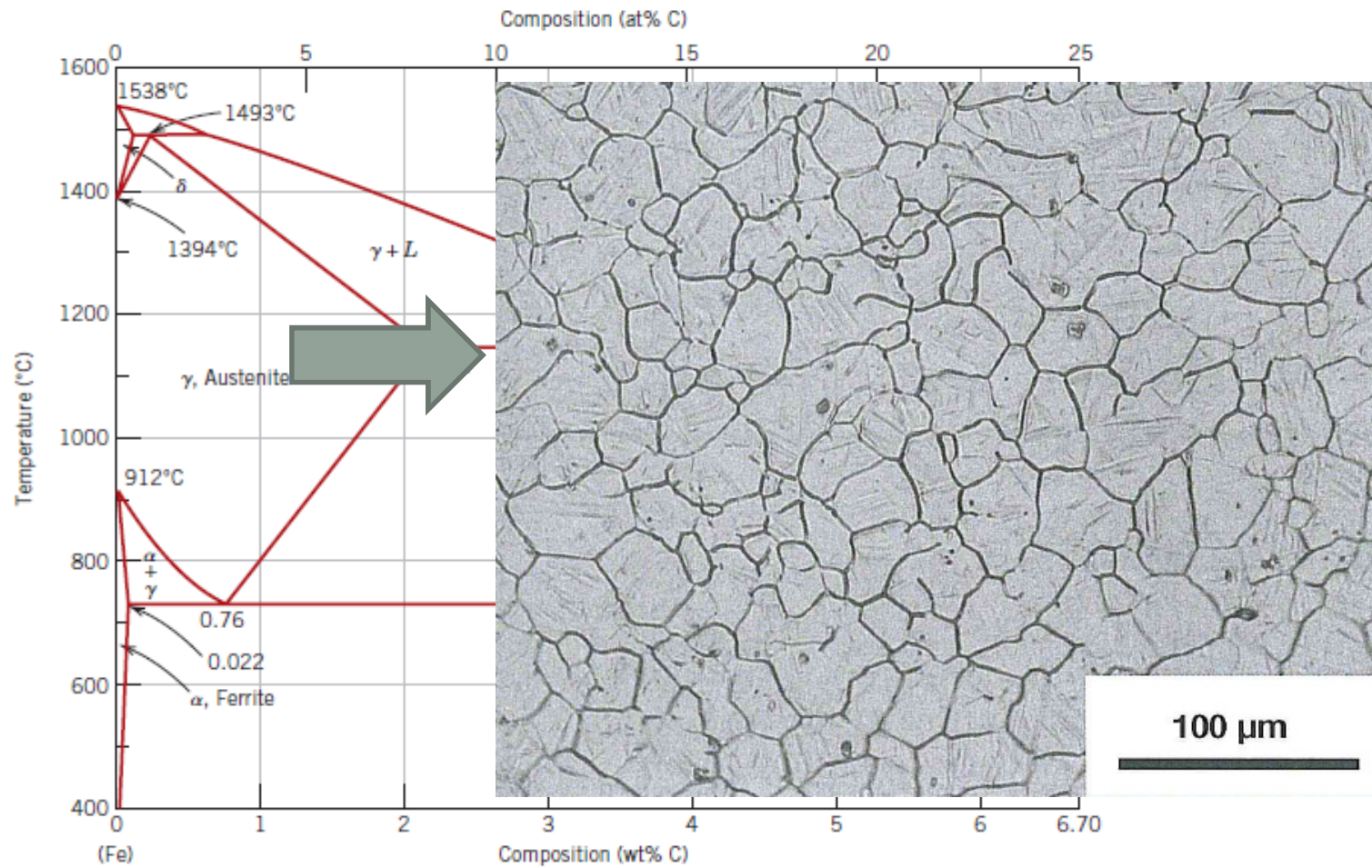
Ferro

- $T < 912 \text{ } ^\circ\text{C}$ -- cúbica de corpo centrado (CCC)
- $912 < T < 1394 \text{ } ^\circ\text{C}$ -- cúbica de faces centradas (CFC)
- $1394 < T < 1538 \text{ } ^\circ\text{C}$ -- cúbica de corpo centrado (CCC)
- $T > 1538 \text{ } ^\circ\text{C}$ -- líquido

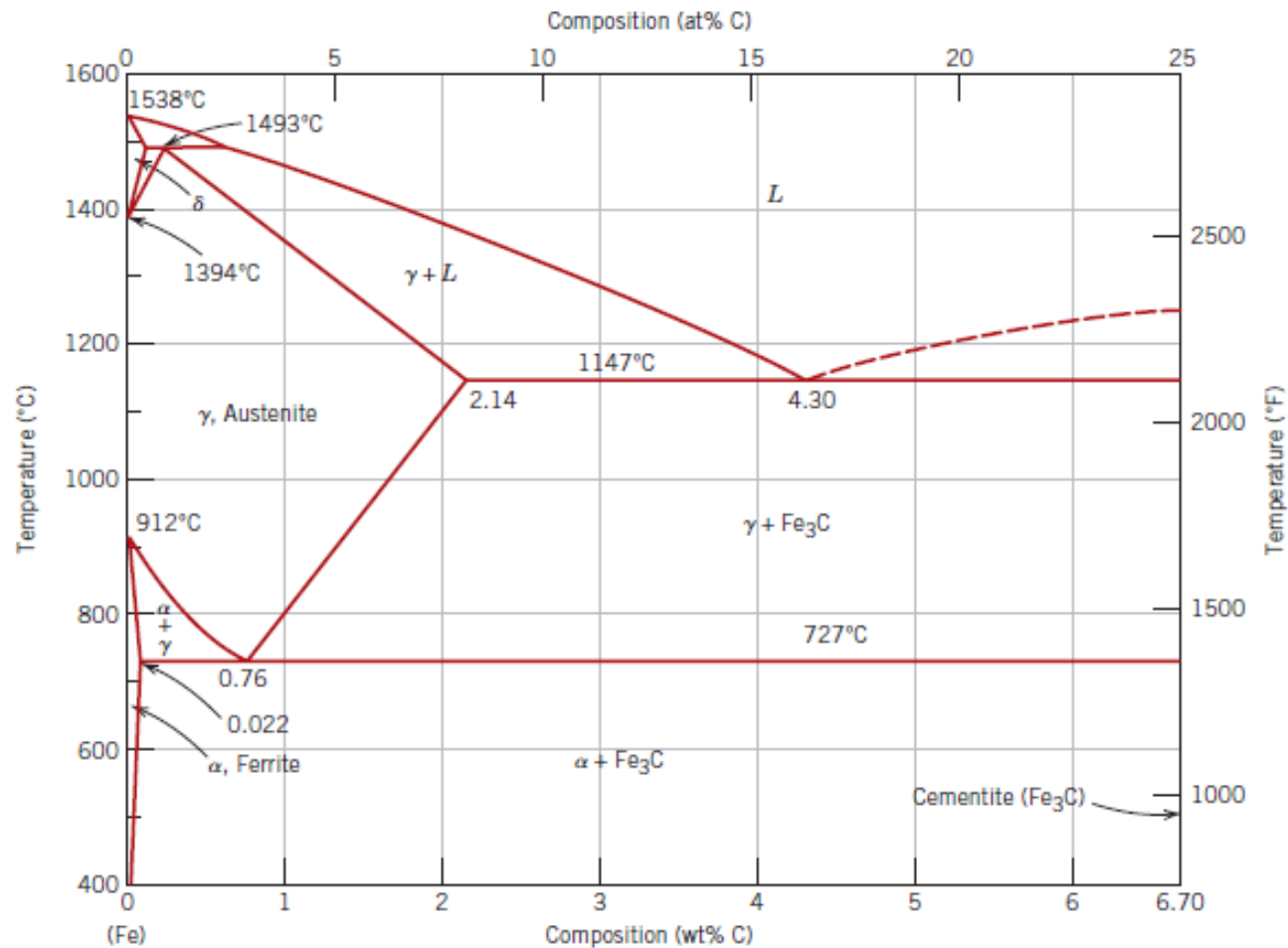
Diagramas Fe-Fe₃C



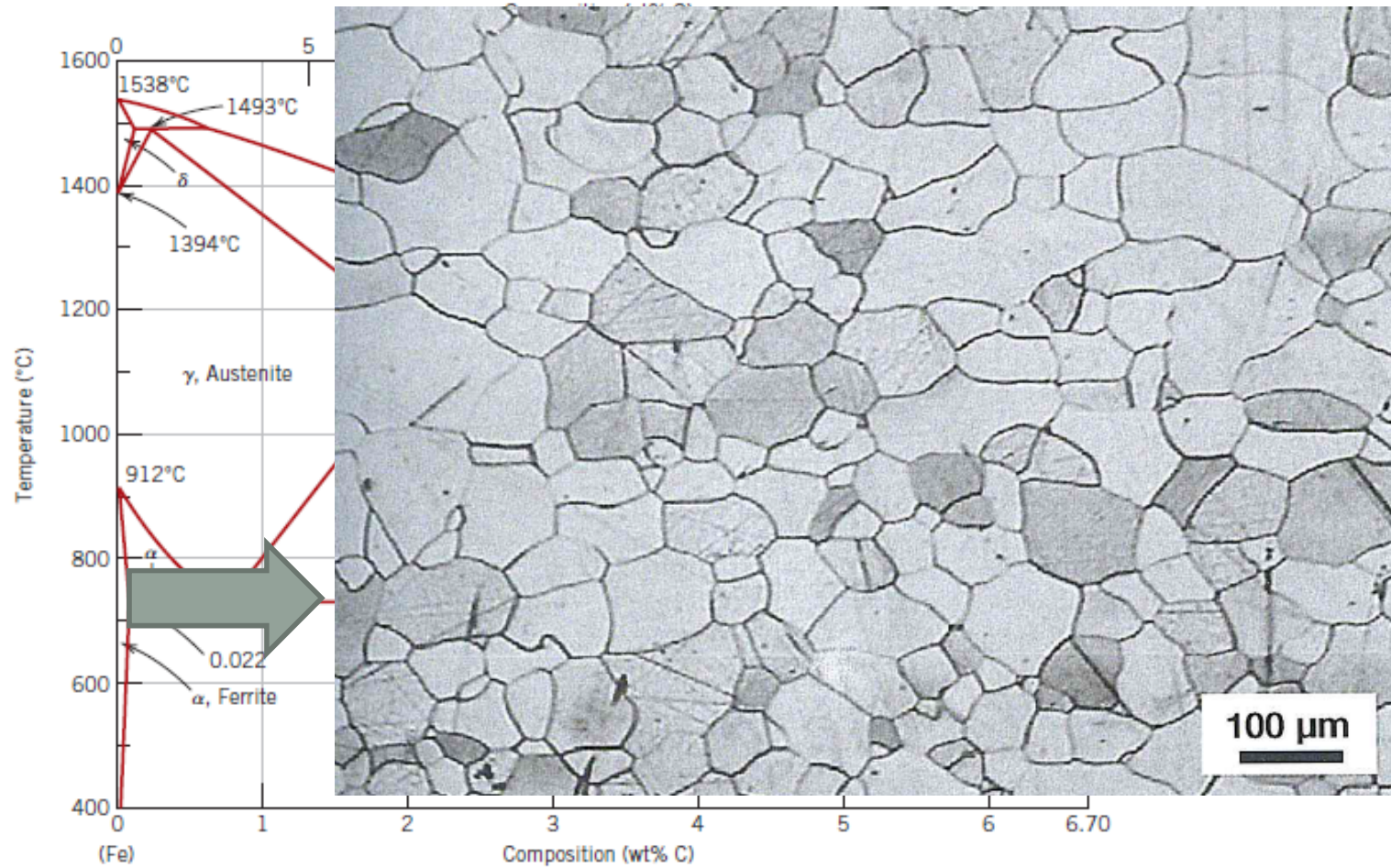
austenita γ



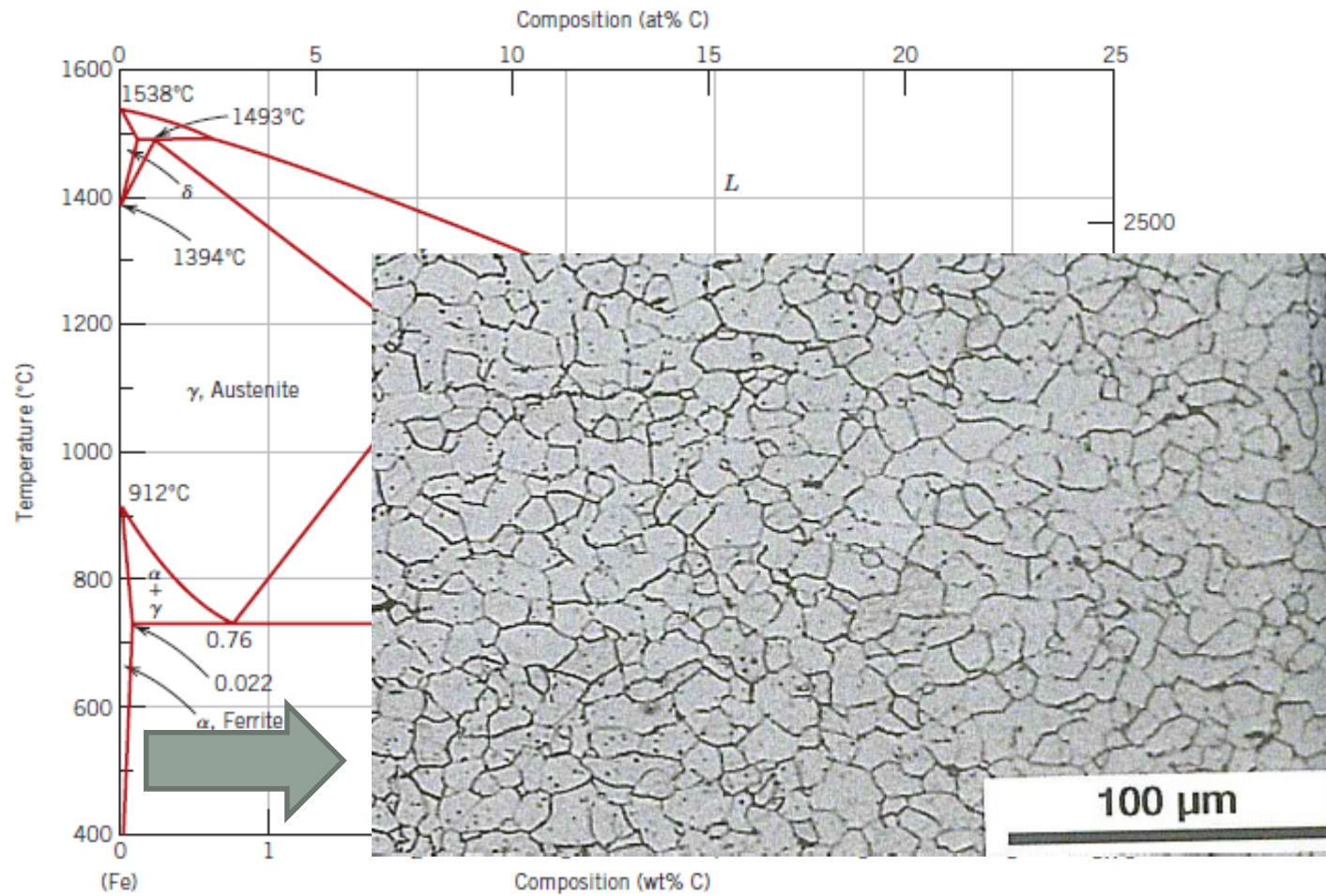
Diagramas Fe-Fe₃C

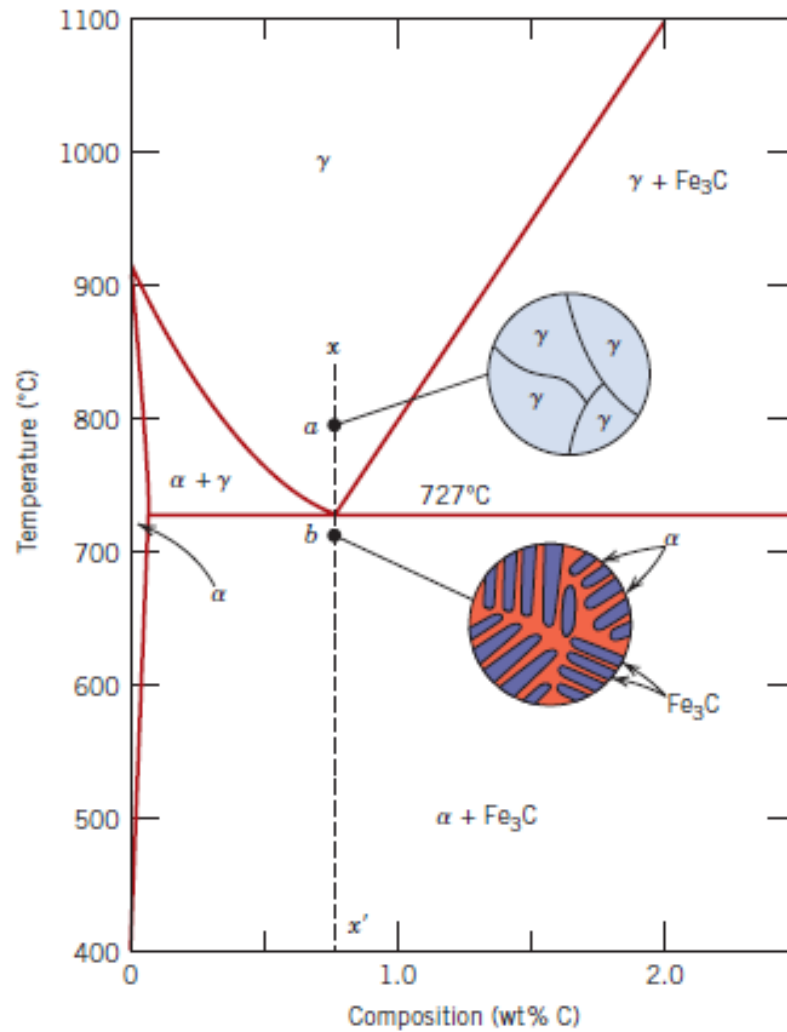


ferrita α



ferrita α + cementita (Fe_3C)

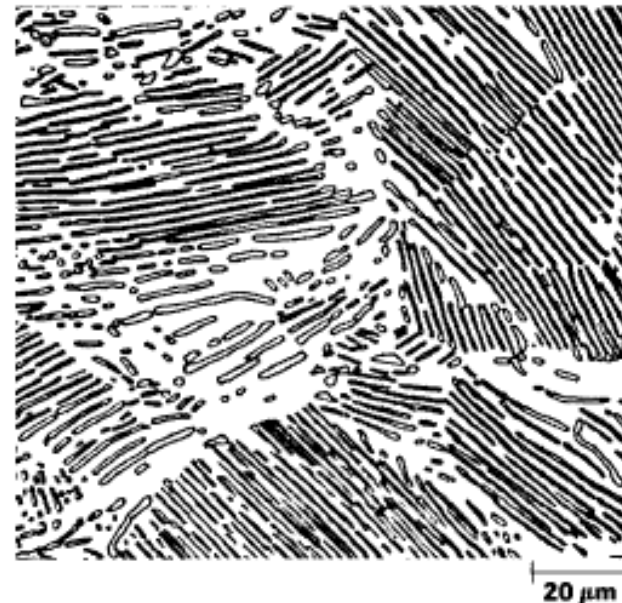
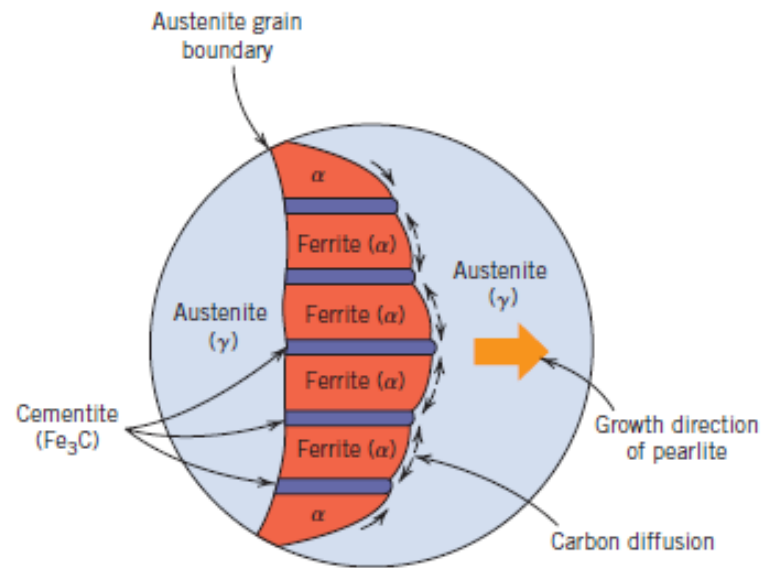




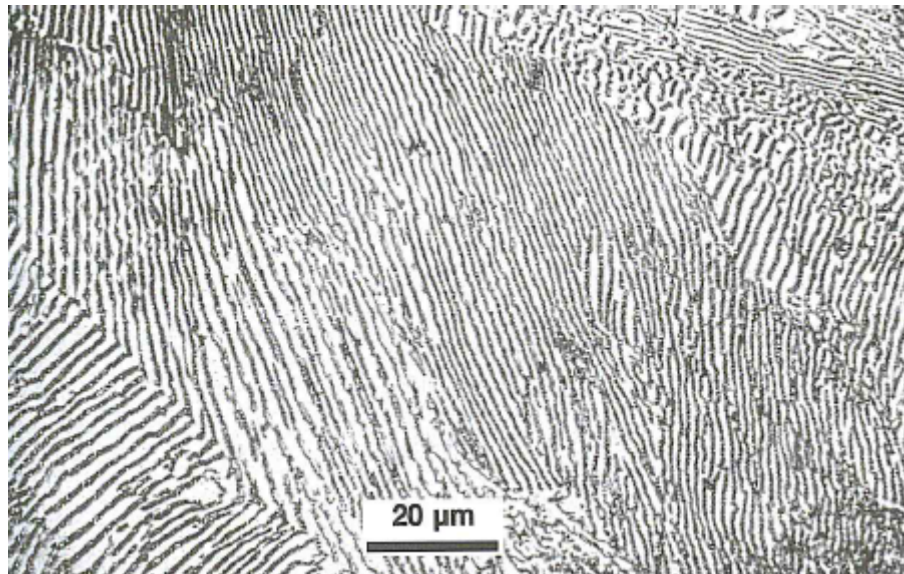
Aço eutetóide
 %C = 0,76

Perlita

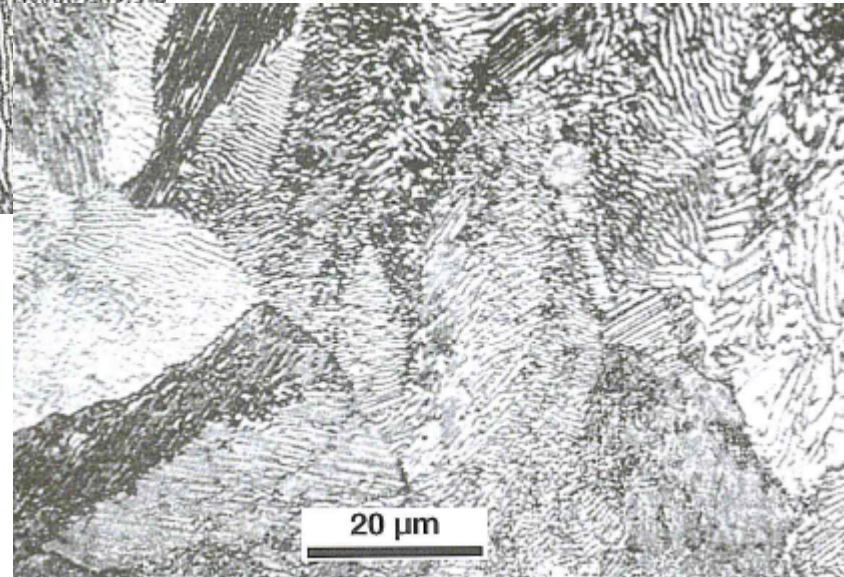
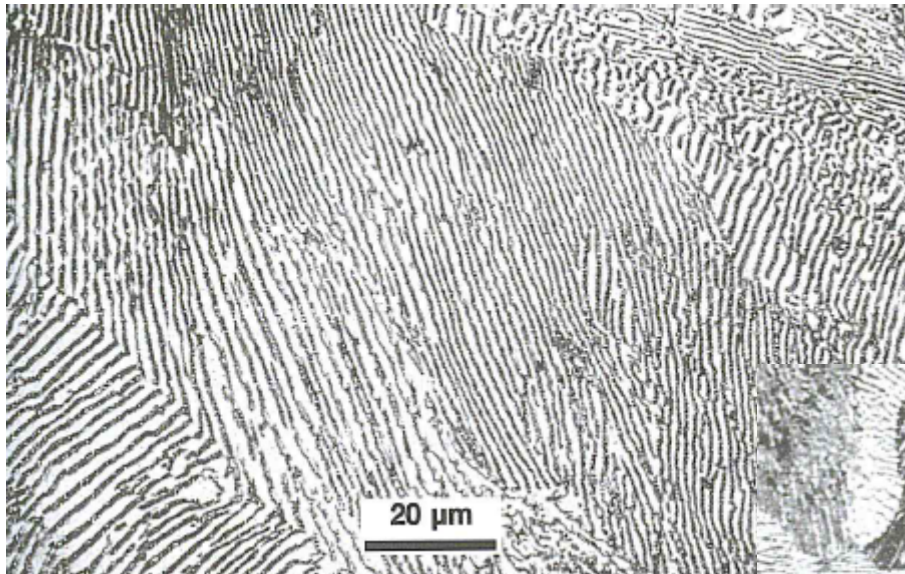
$\alpha + \text{Fe}_3\text{C}$ com forma lamelar

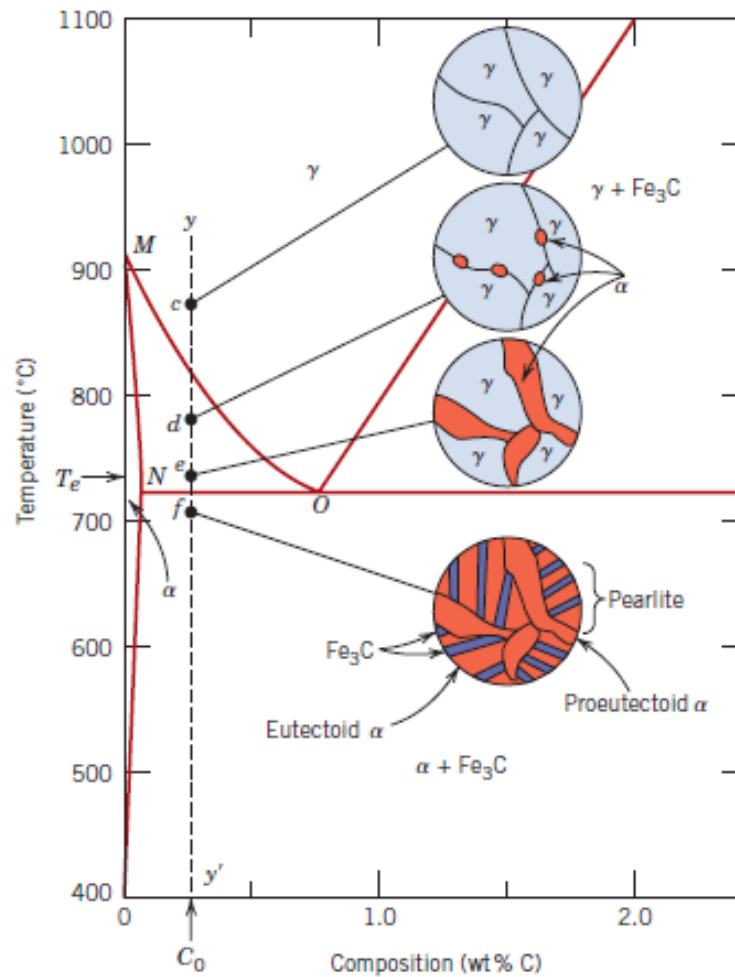


Perlita



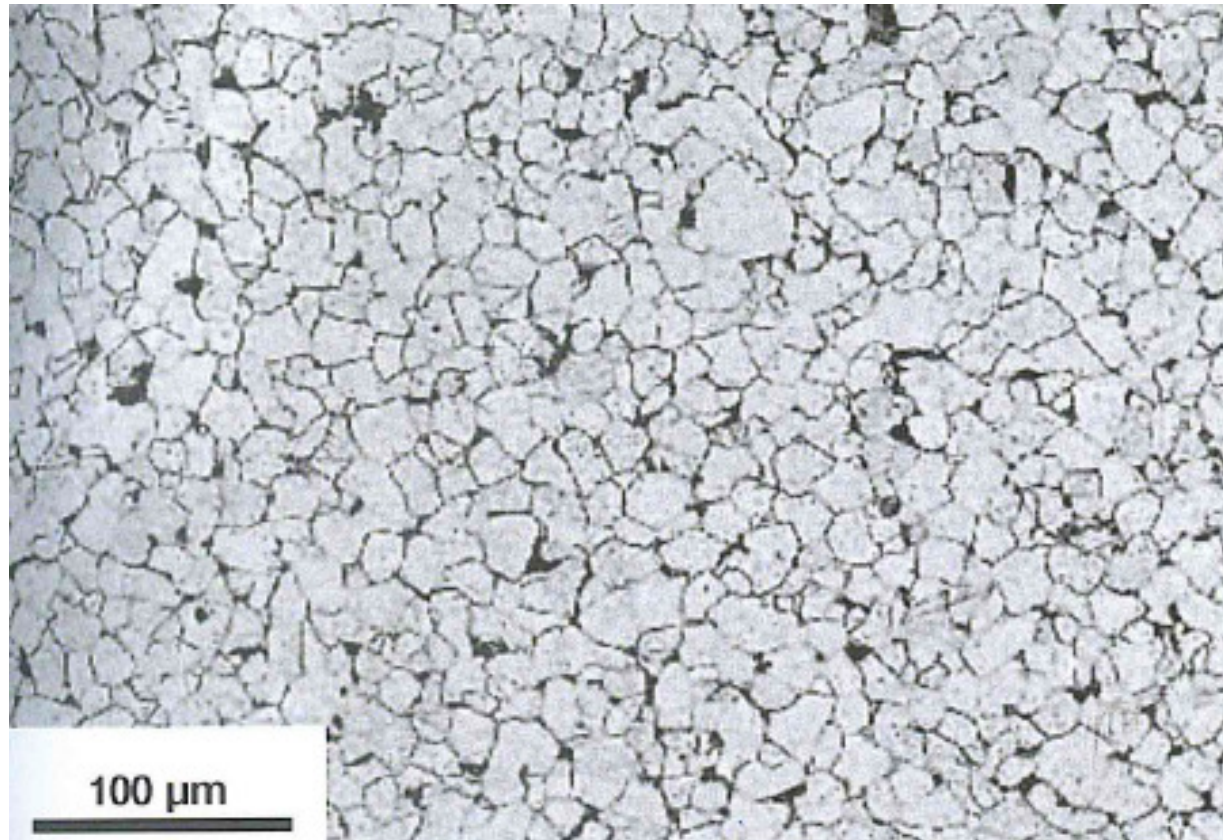
Perlita



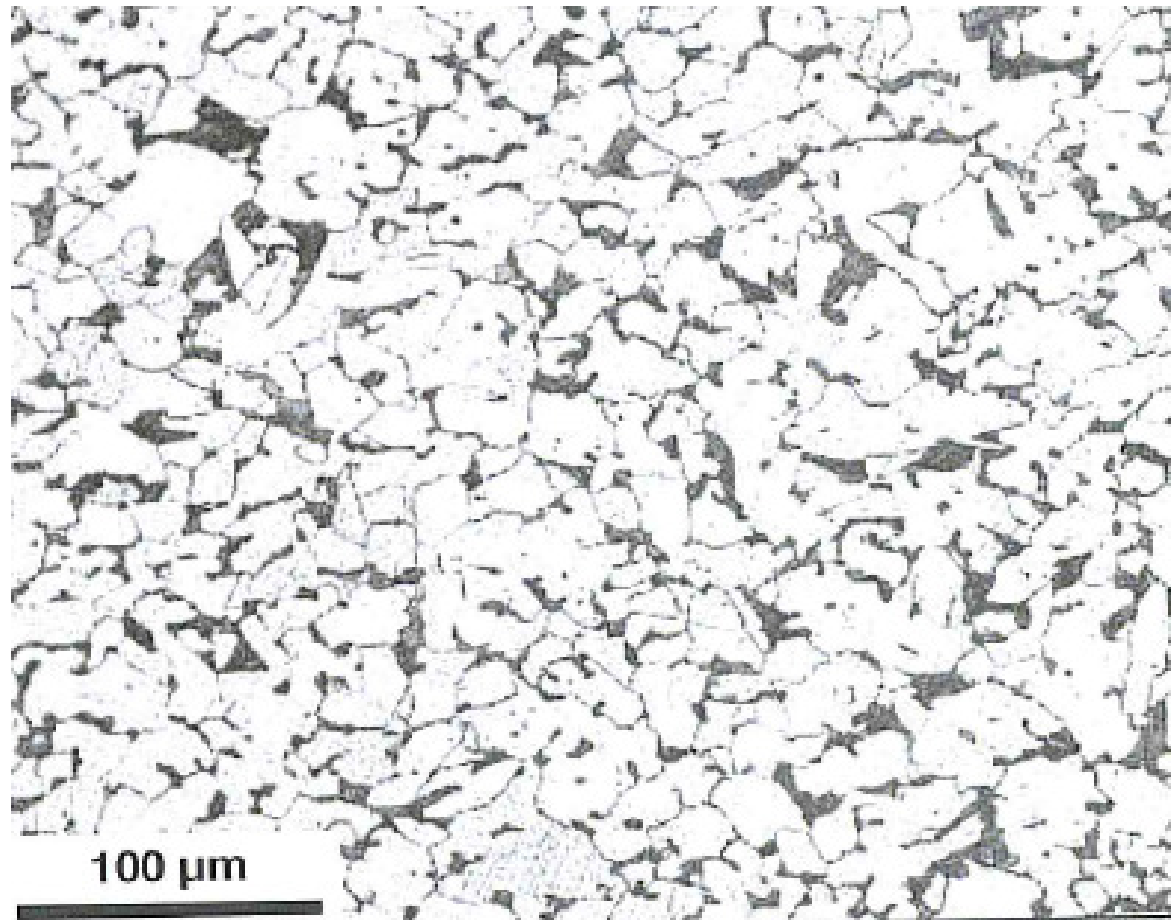


Aço hipoeutetóide
 $\%C < 0,76$

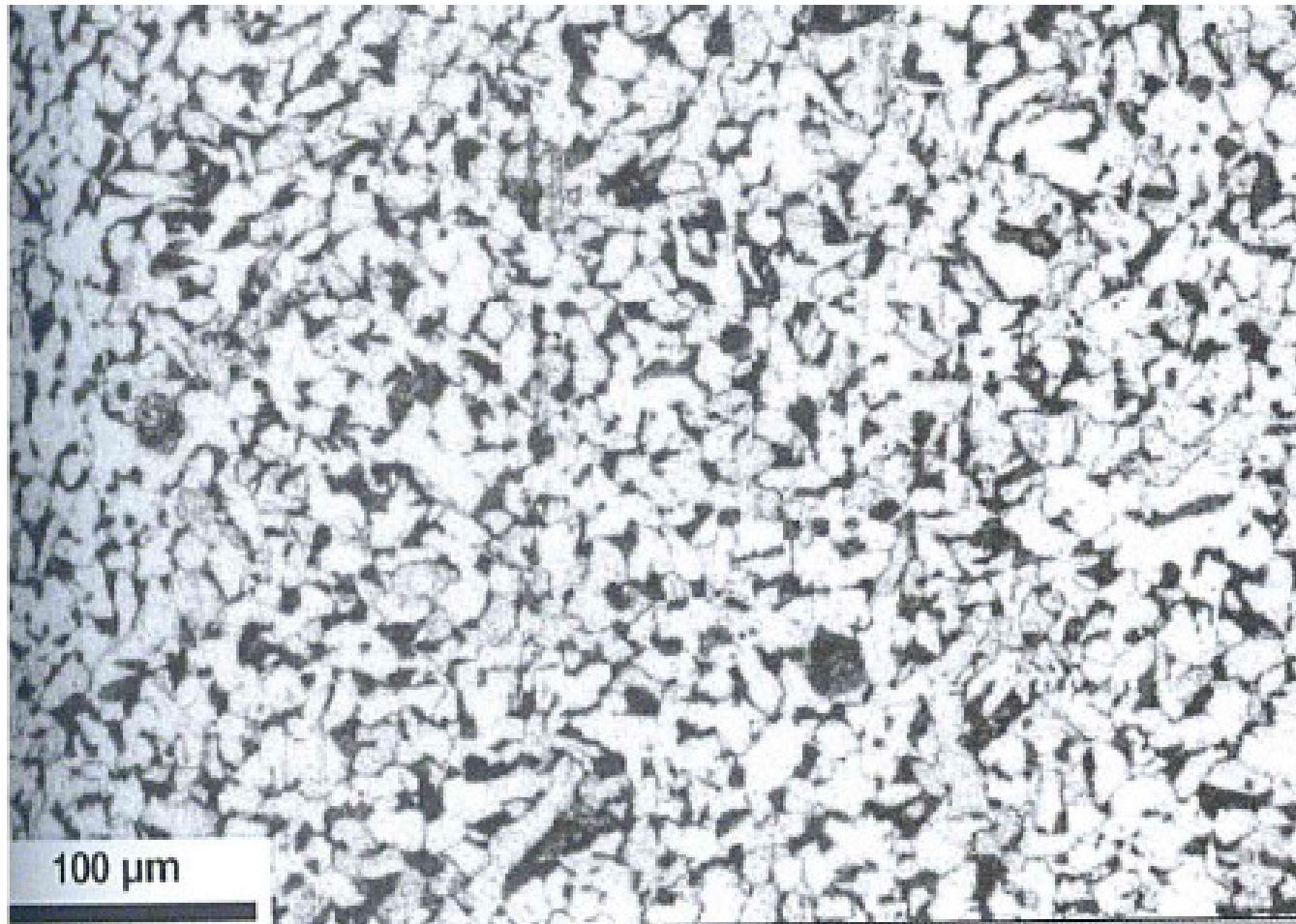
SAE 1006 – ferrita + perlita



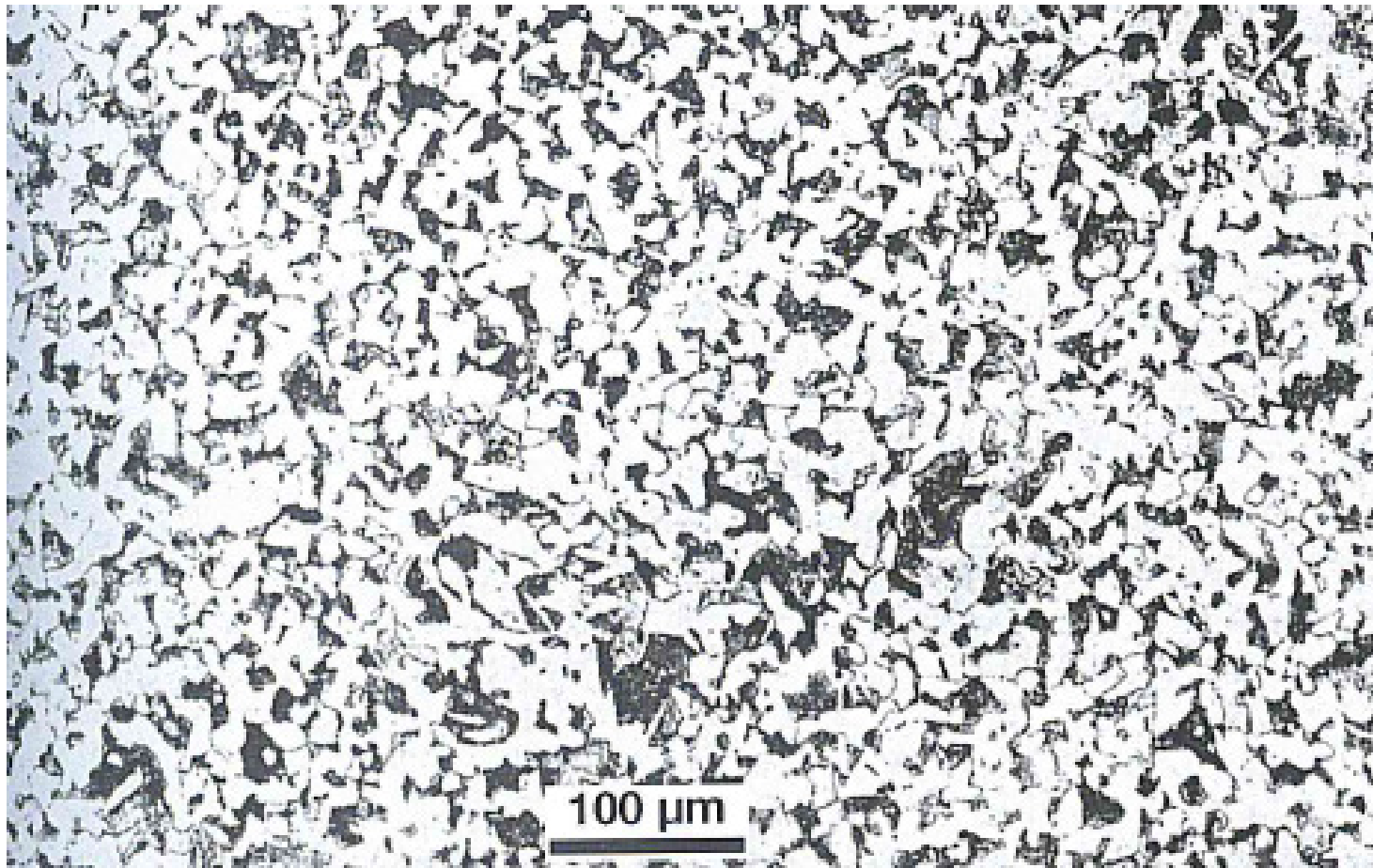
SAE 1010 – ferrita + perlita



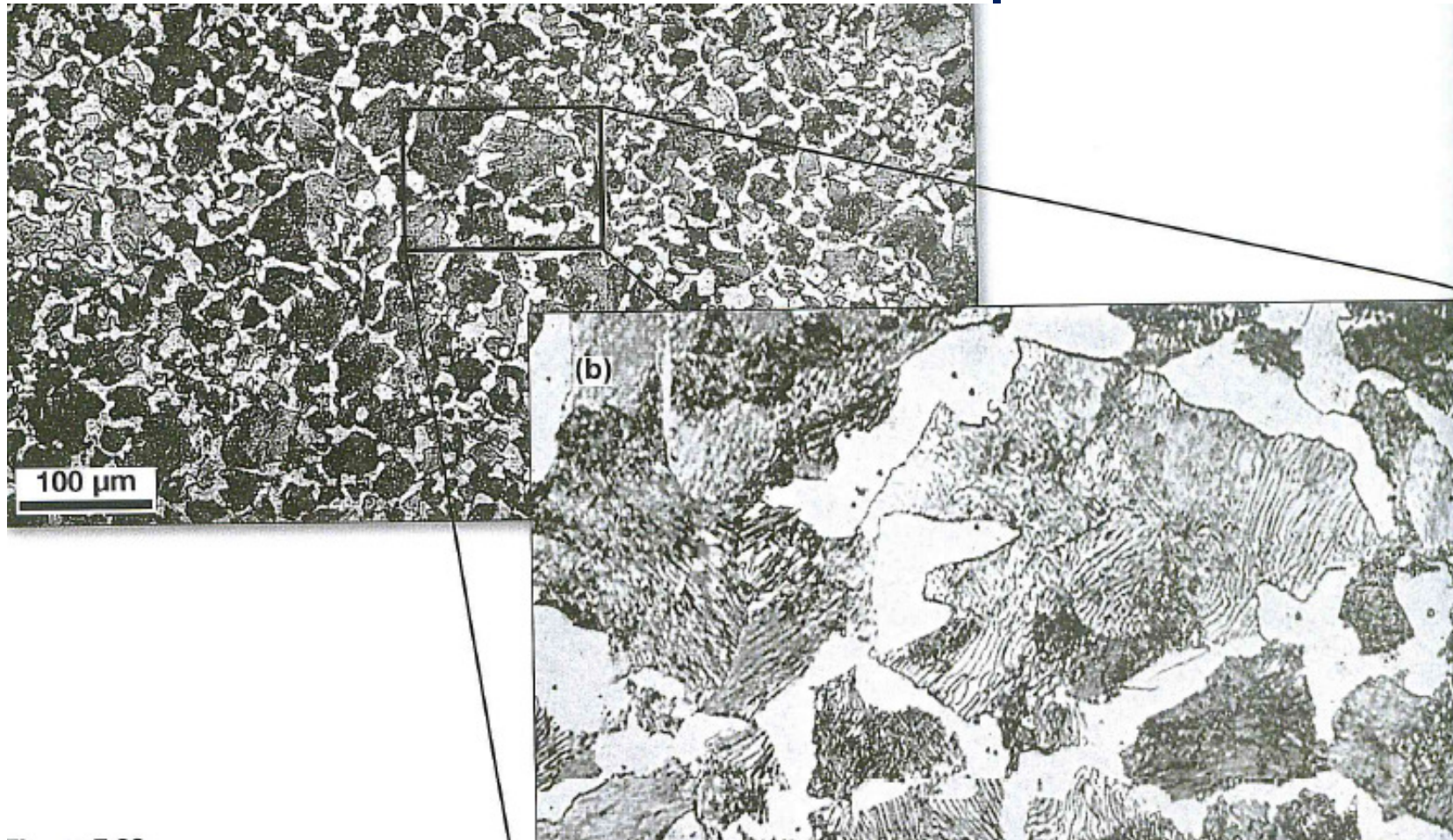
SAE 1015 – ferrita + perlita



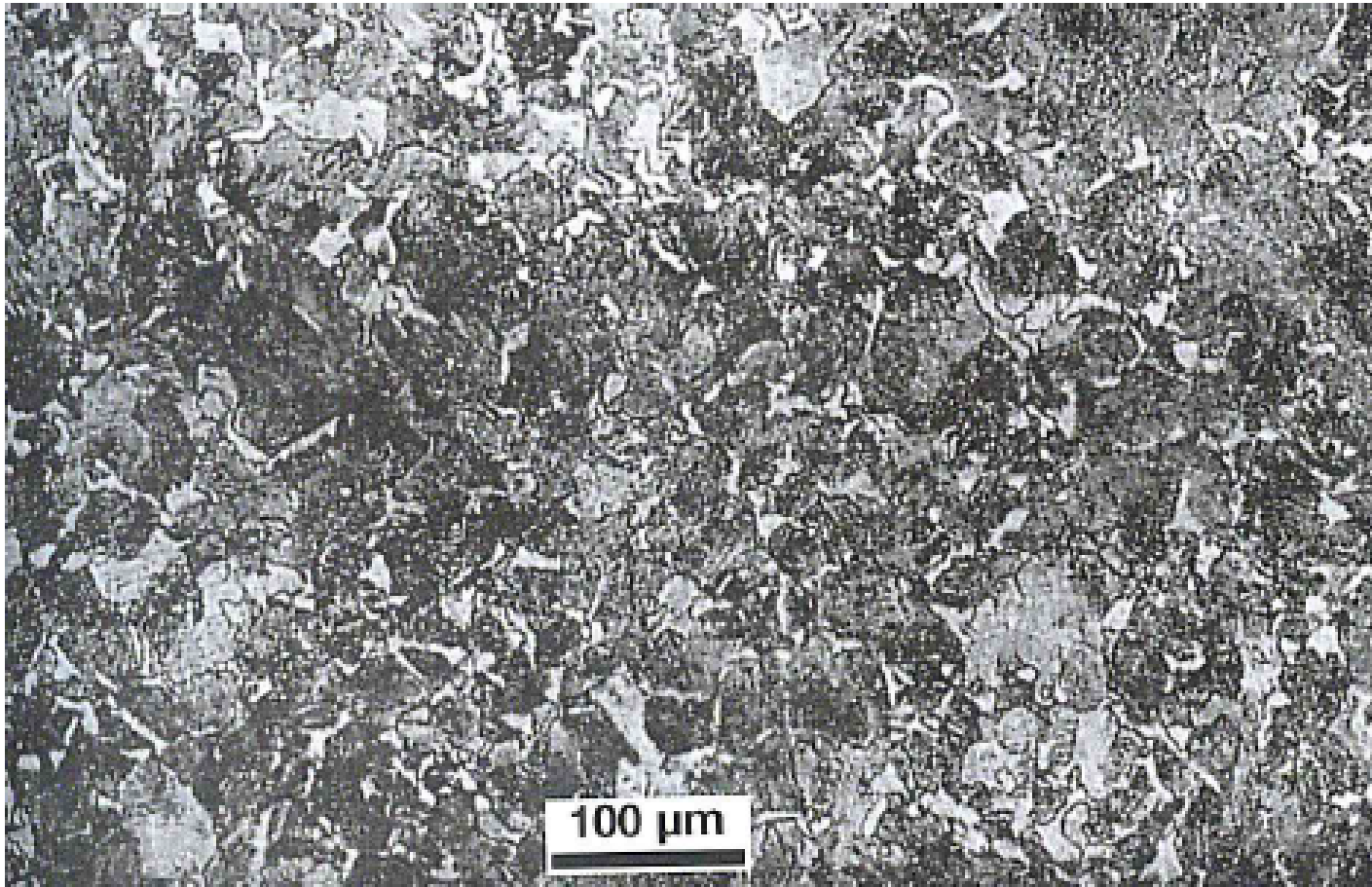
SAE 1030 – ferrita + perlita



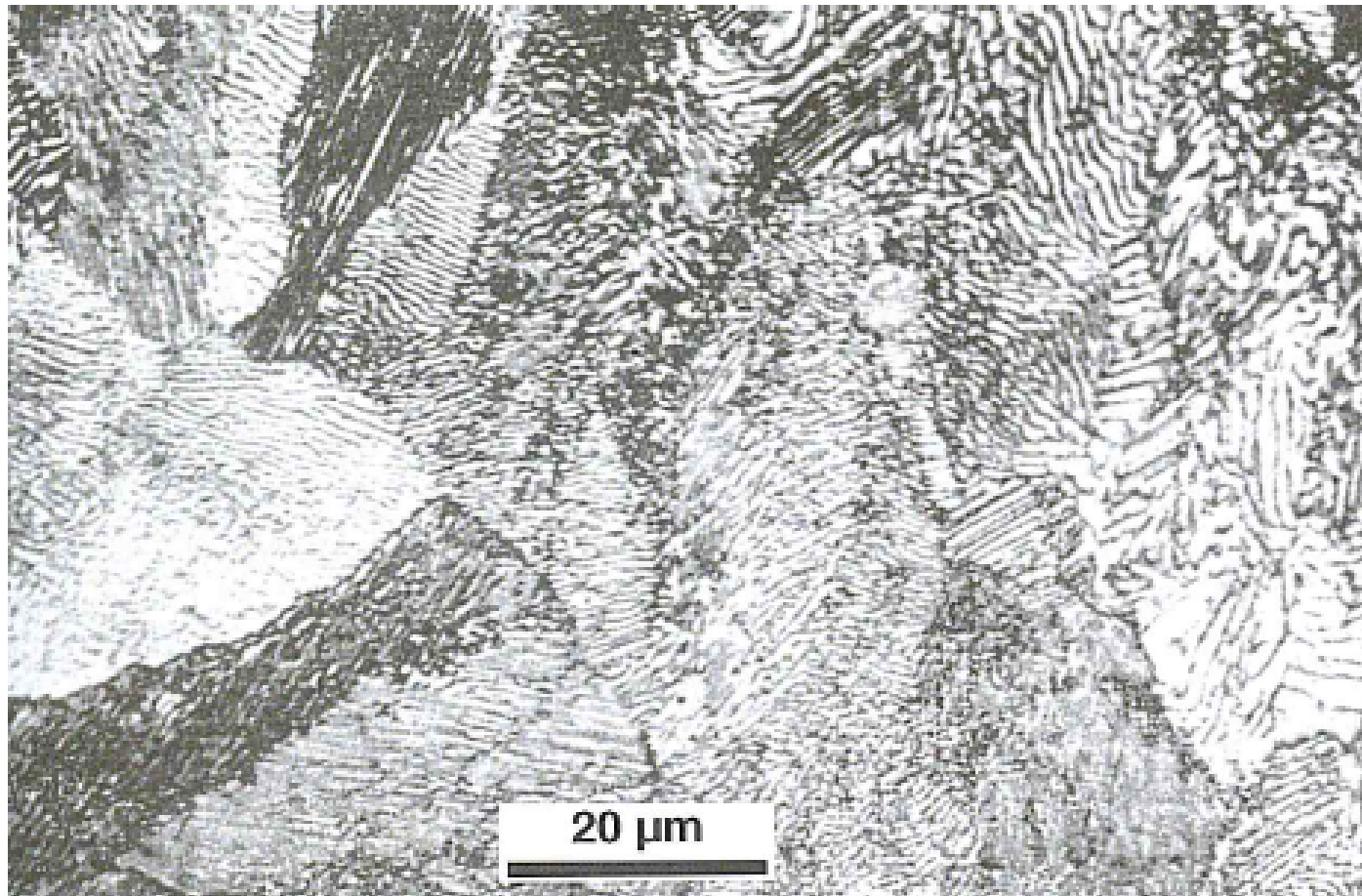
SAE 1050 – ferrita + perlita

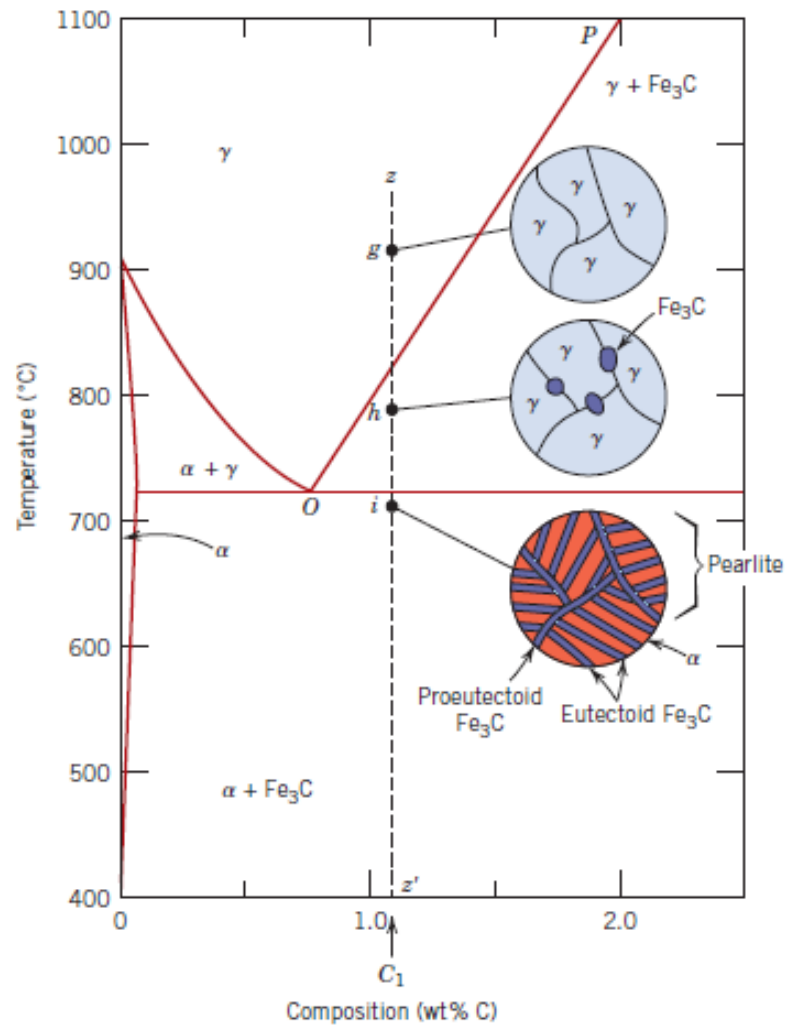


SAE 1070 – ferrita + perlita



SAE 1076 – perlita





Aço hipereutetóide
 $\%C > 0,76$

Fe₃C + perlita



Pearlite

Proeutectoid
cementite

Fe₃C + perlita

