

$2 \text{ cm} + 2 \text{ cm} = 4 \text{ cm}$
 $= 40,000 \mu\text{m}$

matrix Fcc_A1

Temp = 1127 °C
 time = 19.5 h

炭素の濃度分布図 (mole-fraction)

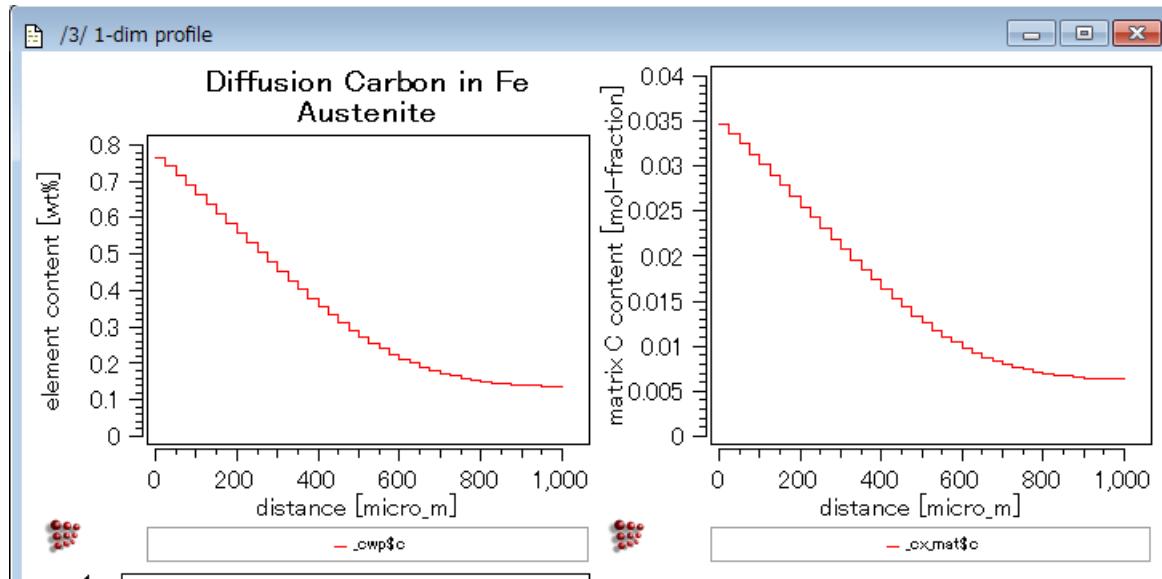
オーステナイト中の炭素拡散

MatCalc ソフトウェア

7.62 at% C
 0.121 at% Cr
 0.686 at% Mn
 0.615 at% Si

WELD

0.07 at% C
 0.032 at% Cr
 0.041 at% Mn
 0.012 at% Si



1 mm
= 1,000 μm

matrix Fcc_A1

Temp = 900 °C
time = 2 h

Carbon concentration profile during carburizing

鉄への浸炭

MatCalc ソフトウェア

Surface
0.8wt%C
(3.61 at%C)

matrix
0.13wt%C
(0.602at%C)

References

- 1986Agren A revised expression for the diffusivity of Carbon in binary Fe-C austenite.
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G.Runnsjo, Scandinavian Journal of Metallurgy, 9 (1980), 205-210.
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C.Wells, W.Batz, R.F.Mehl, Transactions AIME, 188 (1950), 553-560.