

Erratum

Chapter III : Initial microstructures

Table III.6 page 84.

Table 1 – Estimation of the carbon concentration which can be trapped by the density change caused by the dislocation ($w_C^{\alpha, \rho}$) and the Cottrell atmospheres ($w_C^{\alpha, Cottrell}$) and $w_C^{\alpha, defects}$ is the sum.

Microstructure	$\bar{\rho}$ ($10^{15}/m^2$)	$w_C^{\alpha, \rho}$ (wt.%)	$w_C^{\alpha, Cottrell}$ (wt.%)	$w_C^{\alpha, defects}$ (wt.%)
LNM	6.4	0.013	0.057	0.070
RTM	5.6	0.012	0.050	0.062
NB	3.0	0.006	0.027	0.033

Table III.7 page 85.

Table 2 – Phase fractions (wt.%) and carbon content distribution (wt.%) in martensites and nano-bainite microstructures.

	f^α	$f^{\gamma+}$	$f^{\gamma-}$	f^{TIC}	$f^\alpha w_C^\alpha$	$f^{\gamma+} w_C^{\gamma+}$	$f^{\gamma-} w_C^{\gamma-}$	$f^{TIC} w_C^{TIC}$	$f^\alpha w_C^{\alpha, defects}$	$w_C^{deficit}$
LNM	0.93	0.07	-	-	0.437	0.047	-	-	0.065	0.121
RTM	0.79	0.21	-	-	0.403	0.141	-	-	0.049	0.077
NB	0.67	0.21	0.11	0.01	0.121	0.260	0.086	0.084	0.022	0.097

Chapter V : Nucleation and growth model implementation

Equation V.17 page 165.

$$v = \frac{D^m}{r} \left(\frac{c^m - c^{int}}{c^p - c^{int}} \right) = \frac{D^m}{r} \left(\frac{x^m - x^{int}}{\alpha x^p - x^{int}} \right) \quad (1)$$

Equation V.18 page 165.

$$v = \frac{D_i^m}{r} \left(\frac{x_i^m - x_i^{int}}{x_i^p - x_i^{int}} \right) \quad (2)$$

Equation V.20 page 165.

$$x_i^{int} = \frac{v x_i^p - (D_i^m x_i^m)/r}{v - D_i^m/r} \quad (3)$$