APÉNDICE I

R(t) PARA MUESTRAS POLICRISTALINAS

Sea la expresión de *R(t)* dada en el Capítulo 3:

$$R(t)=2\frac{C(180^\circ,t)-C(90^\circ,t)}{C(180^\circ,t)+2C(90^\circ,t)}\ . \qquad \text{(AI.1)}$$

En esta expresión teníamos que:

$$C(\vartheta,t)=C(\vartheta,t)^{exp}-C^A\ , \qquad \text{(AI.2)}$$

$$C(\vartheta,t)^{\exp}=A\ P_1\ P_2\ \varepsilon_1\ \varepsilon_2\ \varepsilon_C\ W(\vartheta,t)^{\exp}\ e^{-\lambda/t}\ +C^A\ , \qquad \text{(AI.3)}$$

$$W^{\exp}(\vartheta,t)=1+A_{22}^{\exp}G_{22}^{\exp}(t)=1+A_{22}^{\exp}\tilde{G}_{22}^{\exp}P_2\cos(\vartheta), \qquad \text{(AI.4)}$$

donde la forma de AI.4 es para el caso de muestras policristalinas. Insertando AI.4 en AI.3, y ésta en AI.2, vamos a obtener

$$R(t)=\frac{2\left[1+A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)P_2(-1)-1-A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)P_2(0)\right]}{1+A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)P_2(-1)+2+2A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)P_2(0)}. \qquad \text{(AI.5)}$$

Recordando que el polinomio de Legendre $P_2(x)=\frac{1}{2}(3x^2-1)$, tenemos que $P_2(-1)=1$ y $P_2(0)=-1/2$, tenemos que

$$R(t)=\frac{2\left[1+A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)-1+\frac{1}{2}A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)\right]}{1+A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)P_2+2-2\frac{1}{2}A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)}$$

$$R(t) = \frac{2\left[\frac{3}{2}A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t)\right]}{3} = A_{22}^{\exp}\tilde{G}_{22}^{\exp}(t). \tag{AI.6}$$

De esta forma tenemos que

$$R(t) = A_{22}^{\exp}\,\tilde{G}_{22}^{\exp}(t). \tag{AI.7}$$