

# Crecimiento de Fisuras por Fatiga

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LPM -GME

# Clasificación de Fatiga

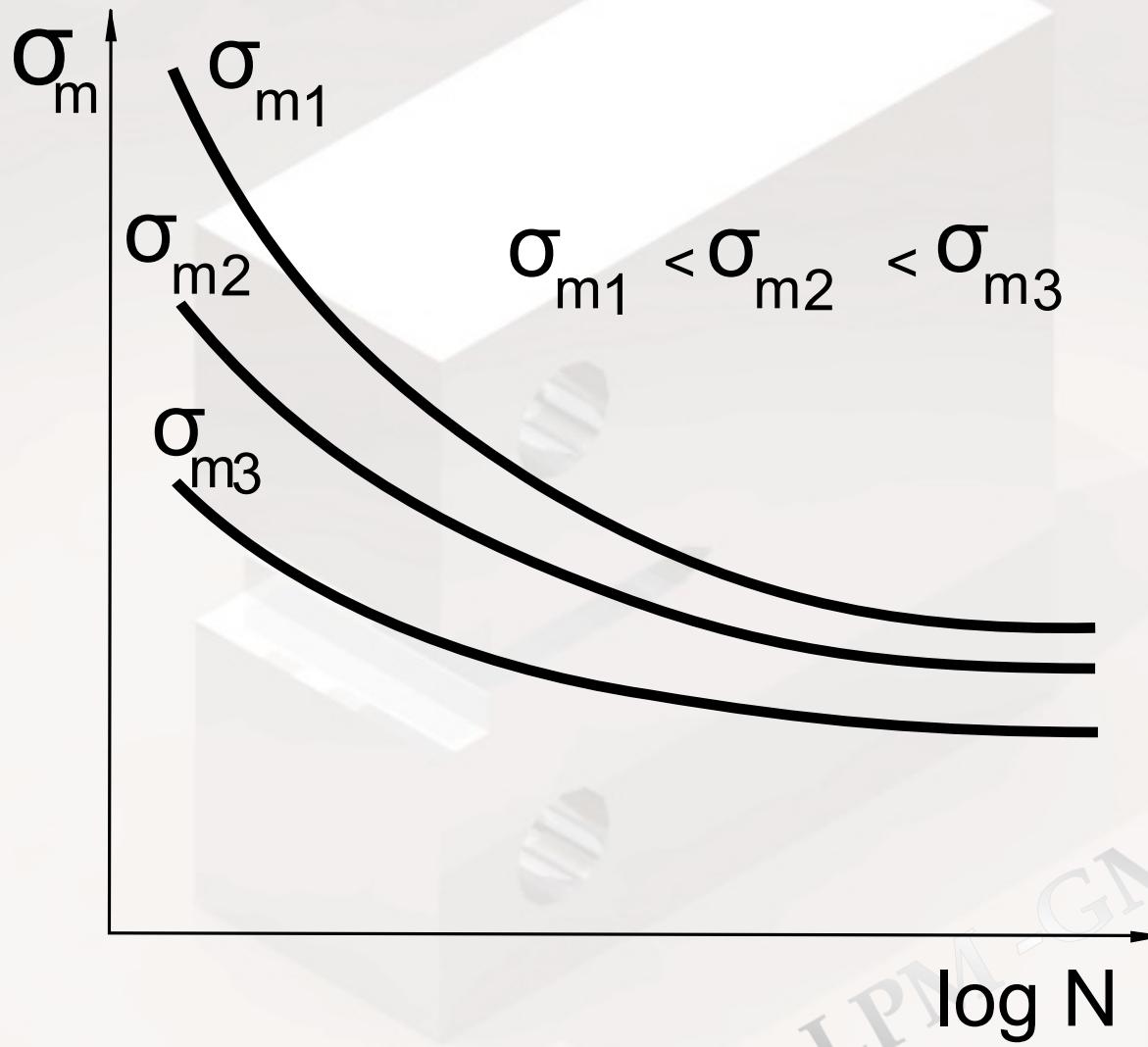
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- **Global**
  - ▶ Fatiga de alto ciclo
  - ▶ Fatiga de bajo ciclo
  - ▶ Fatiga de ultra alto ciclo
- **Crecimiento de fisuras por fatiga**

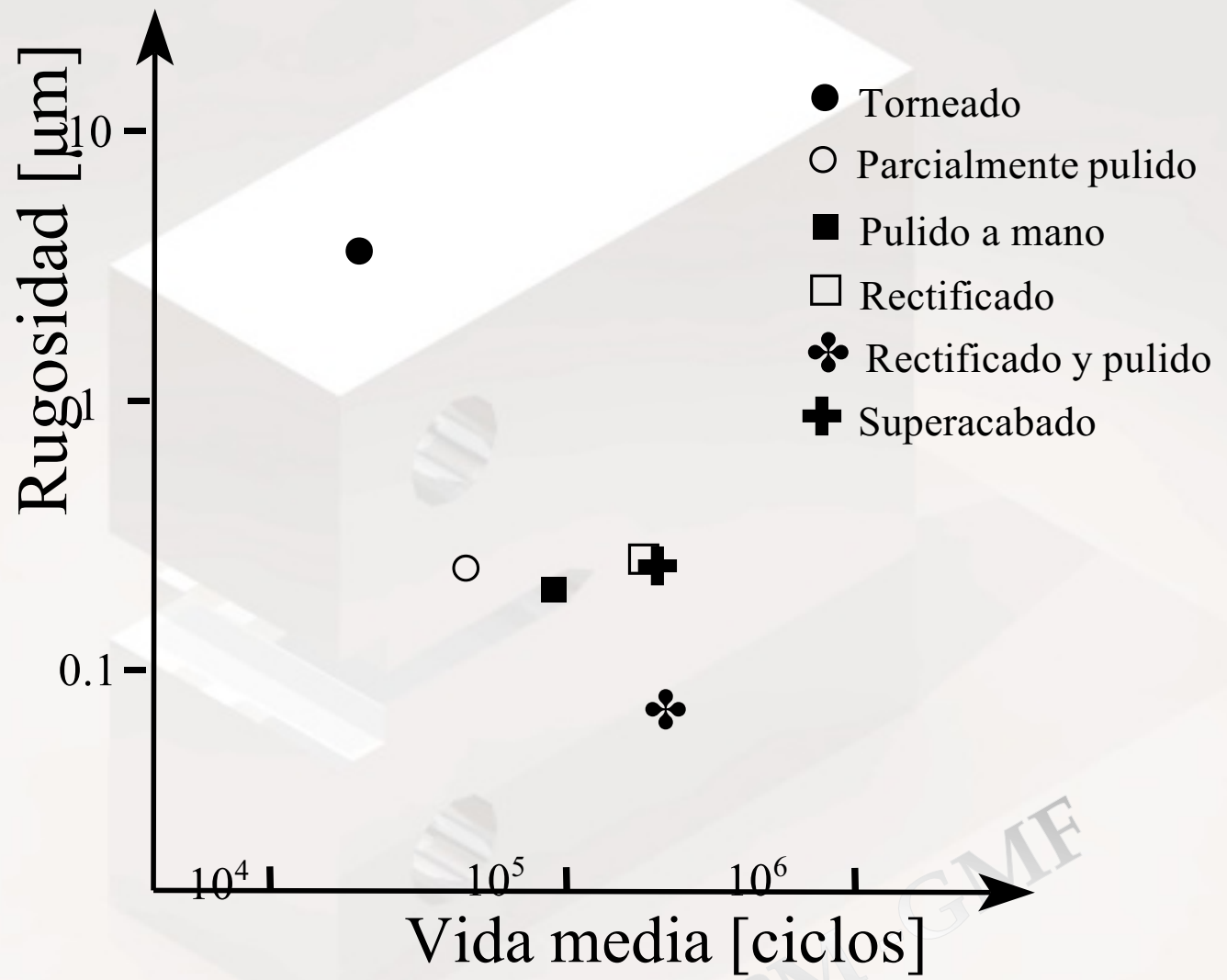
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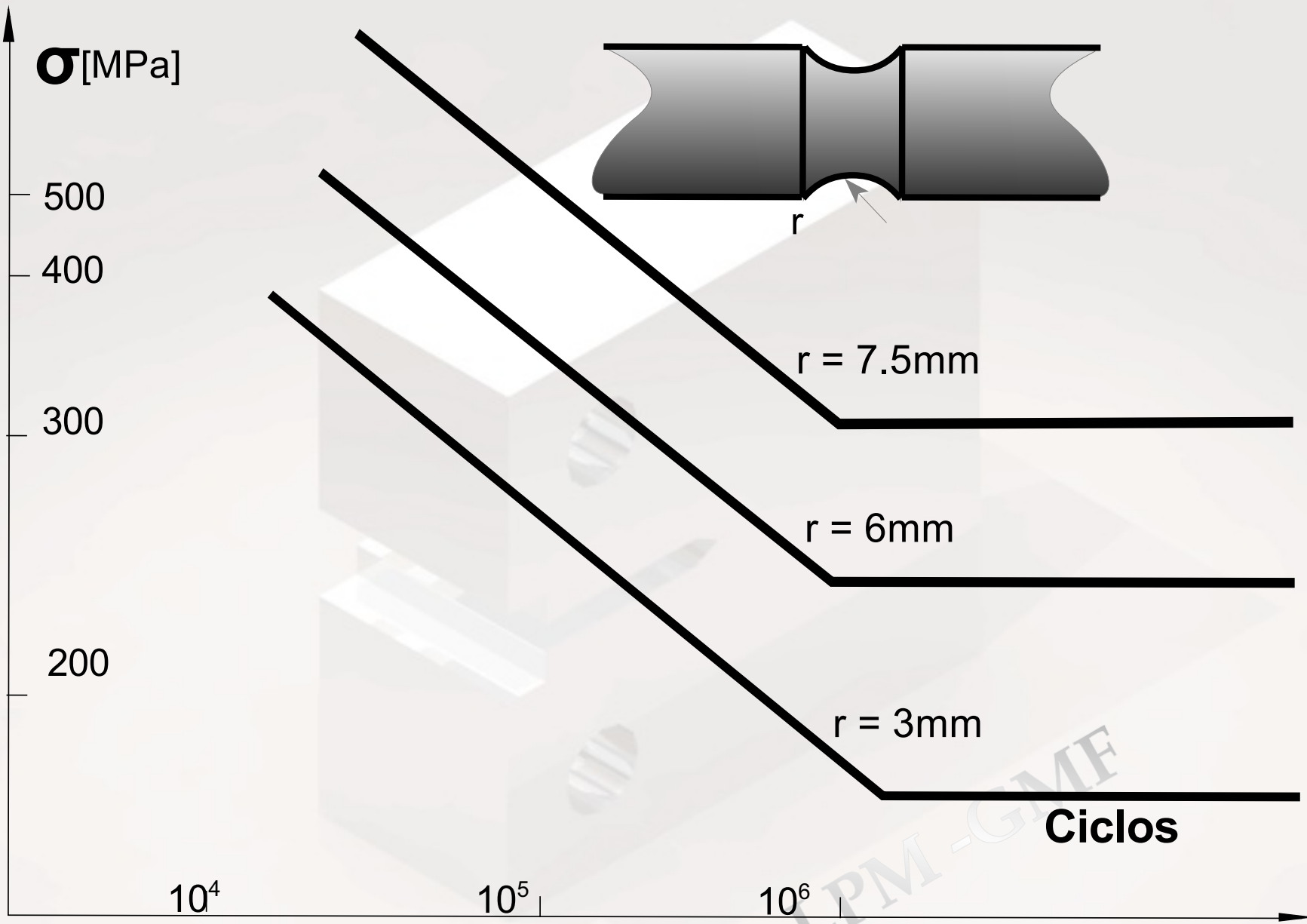
# Enfoque tradicional

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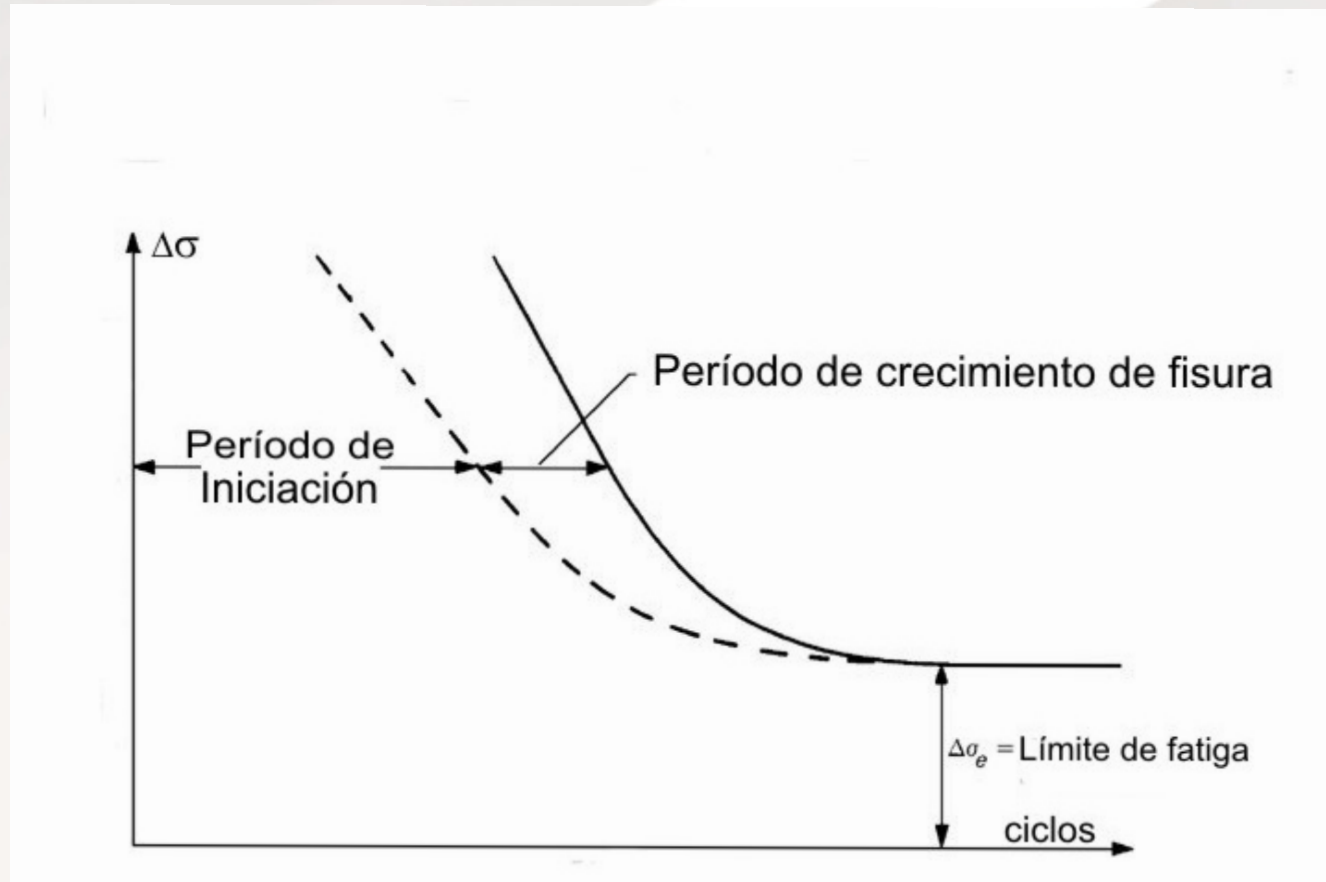


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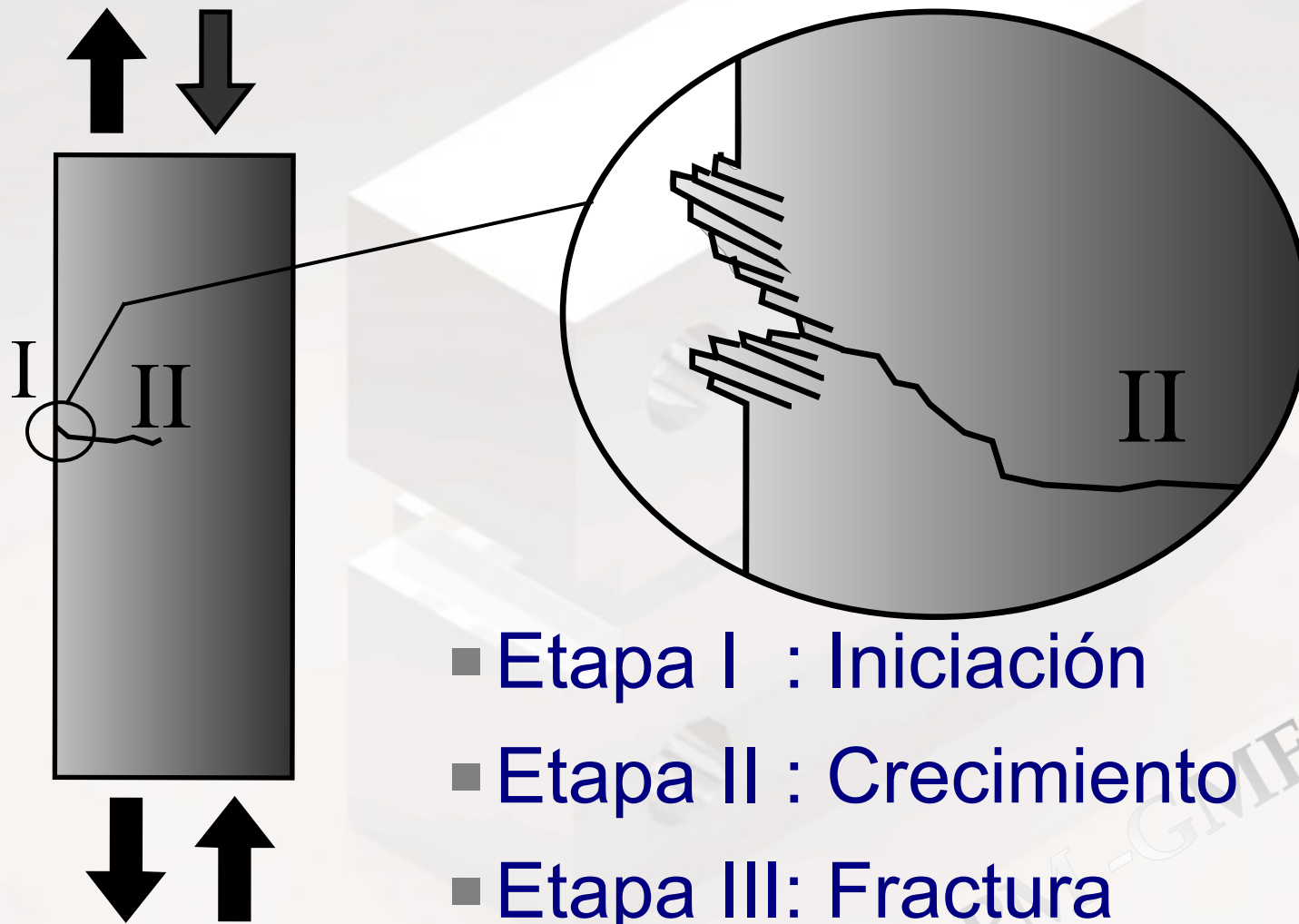
# Iniciación y Crecimiento



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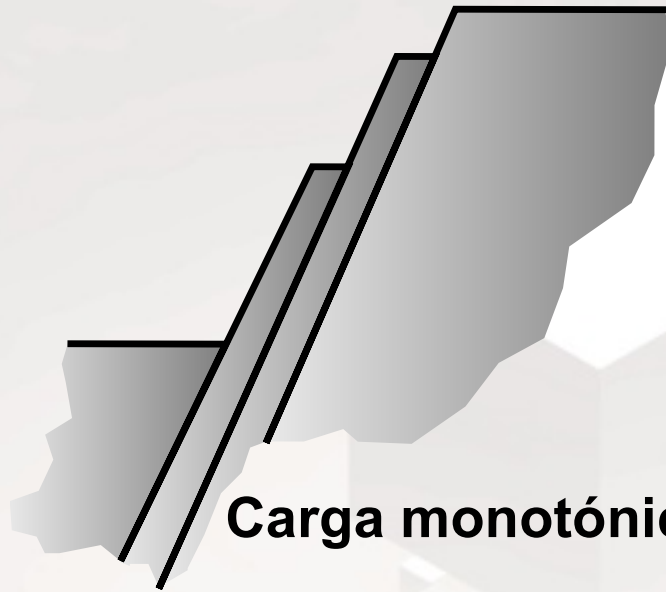
# Etapas en la fatiga

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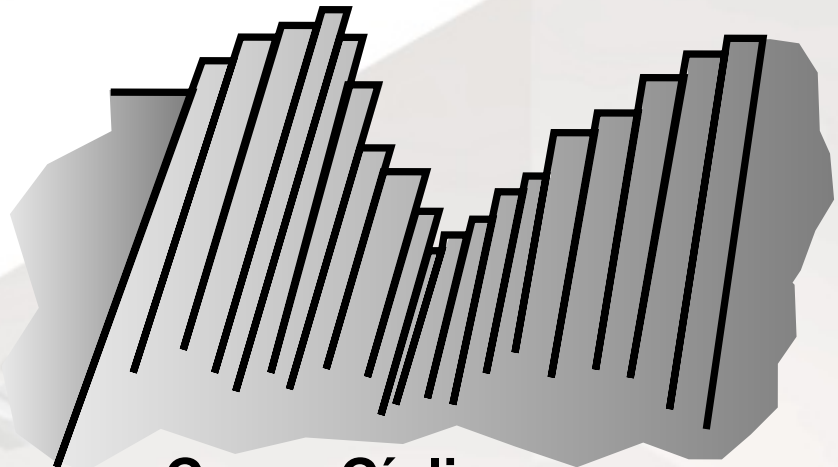


# Extrusiones e intrusiones

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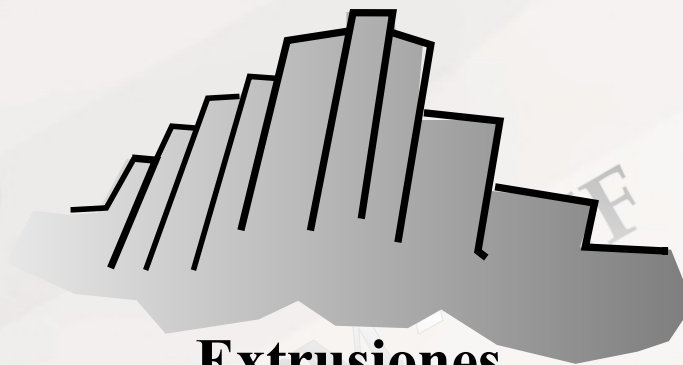
**Carga monotónica**



**Carga Cíclica**

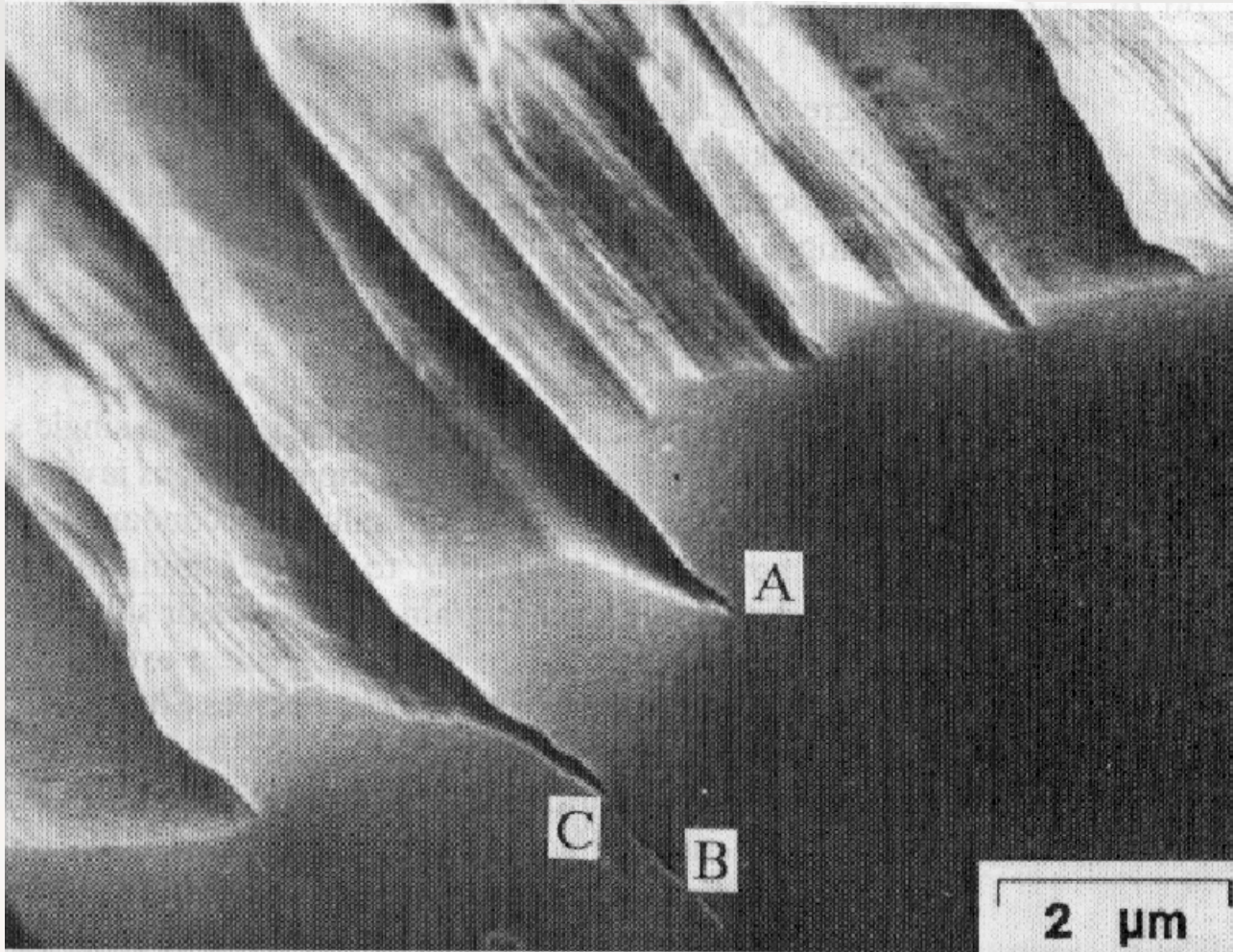


**Intrusiones**



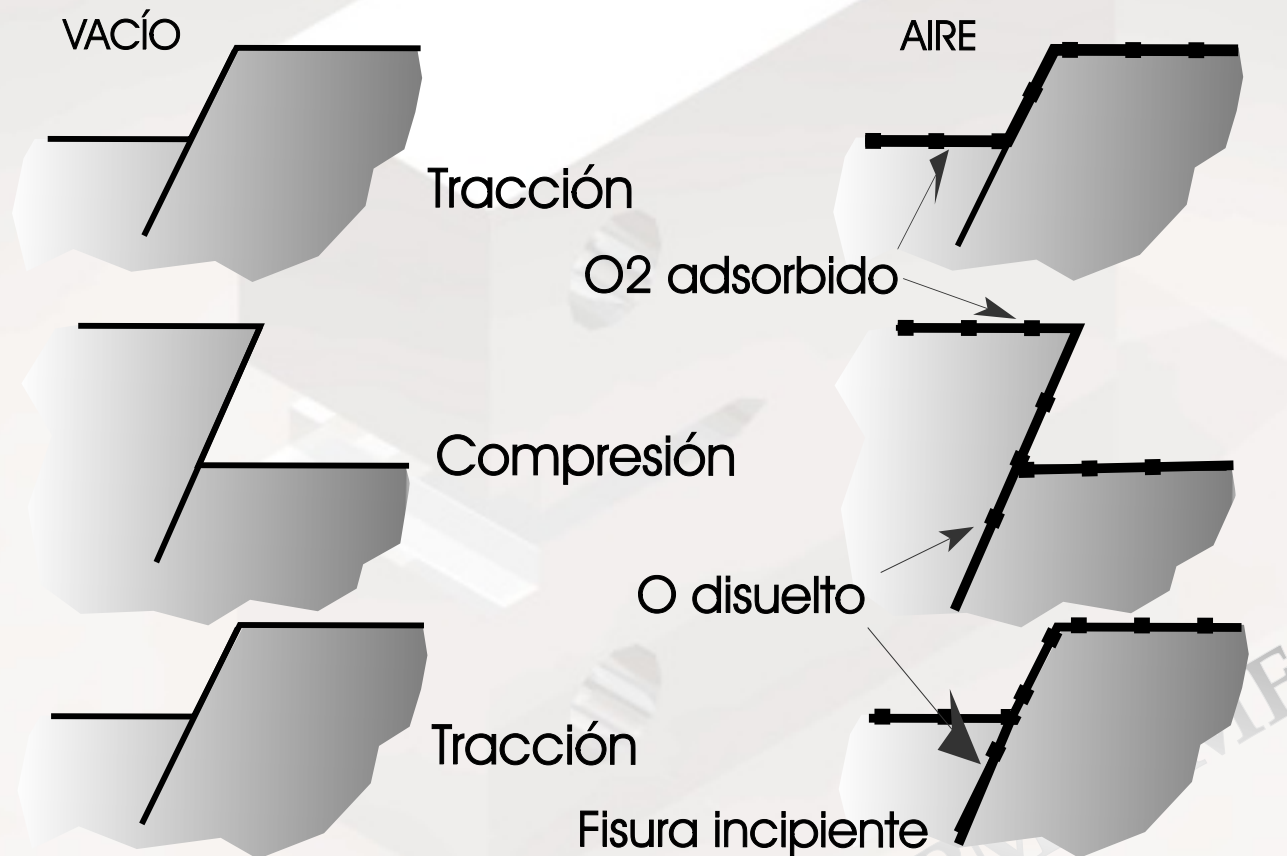
**Extrusiones**





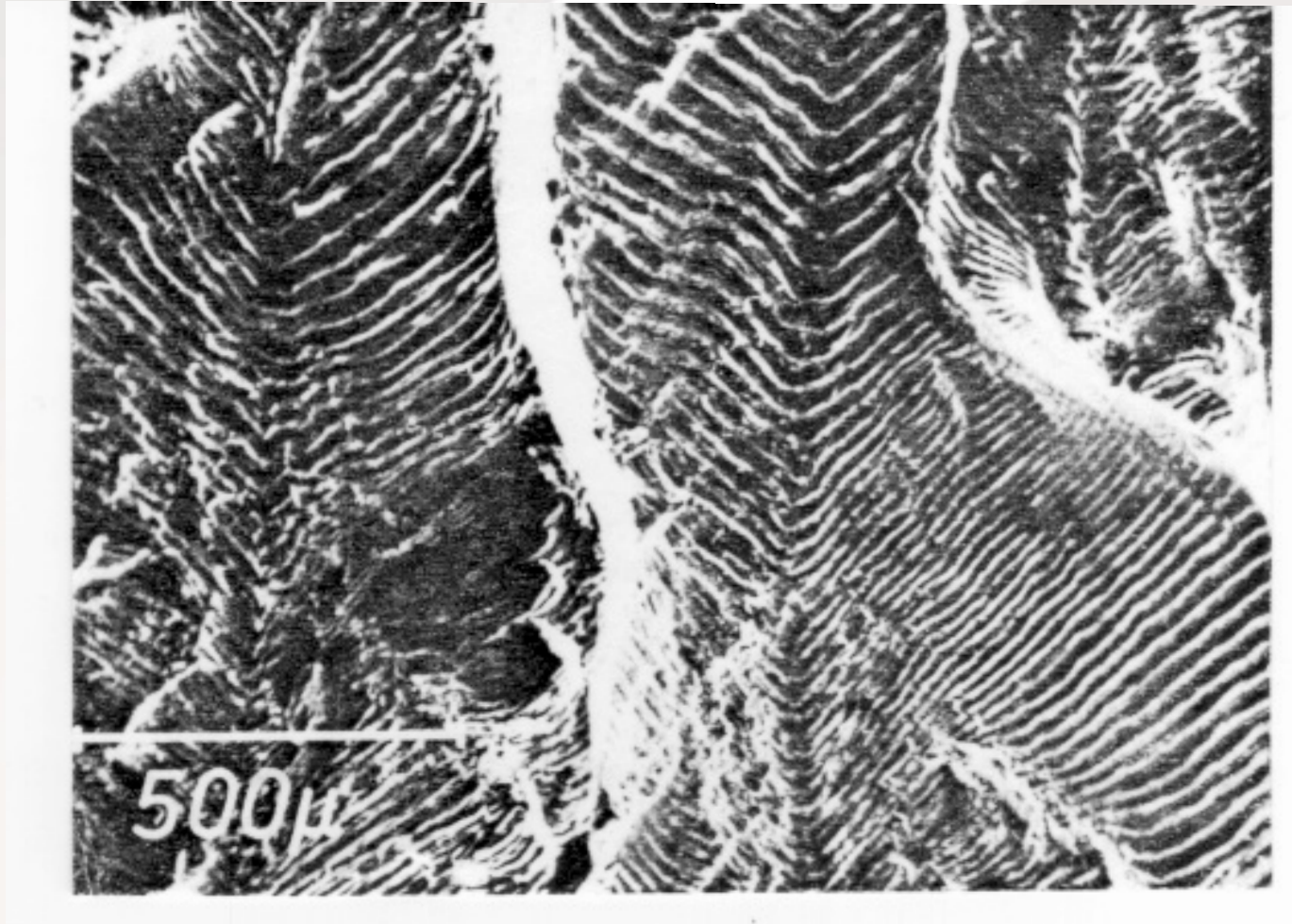
LPM

# Efecto del medioambiente

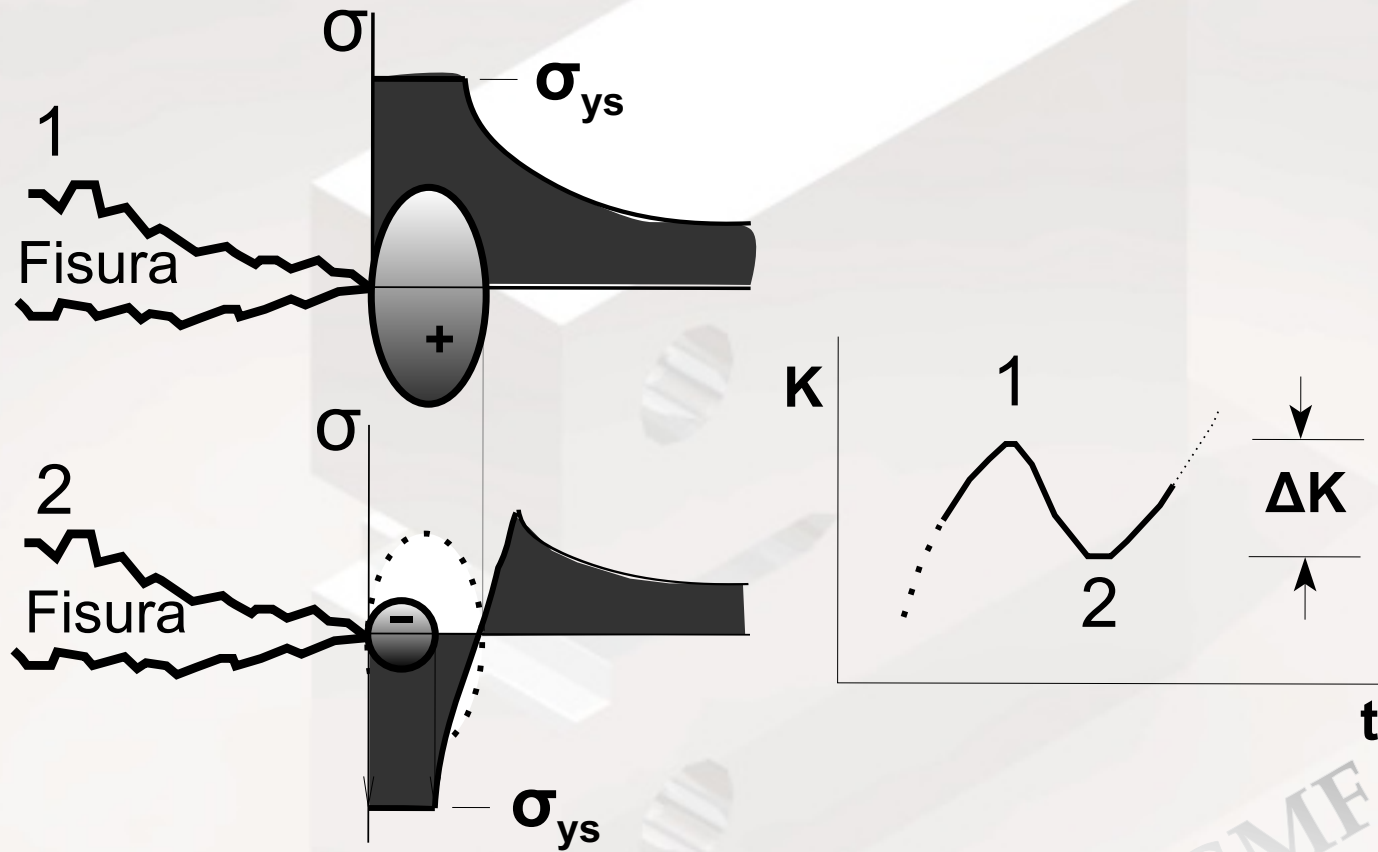


# Propagación de la fisura

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# Reversión de la deformación plástica



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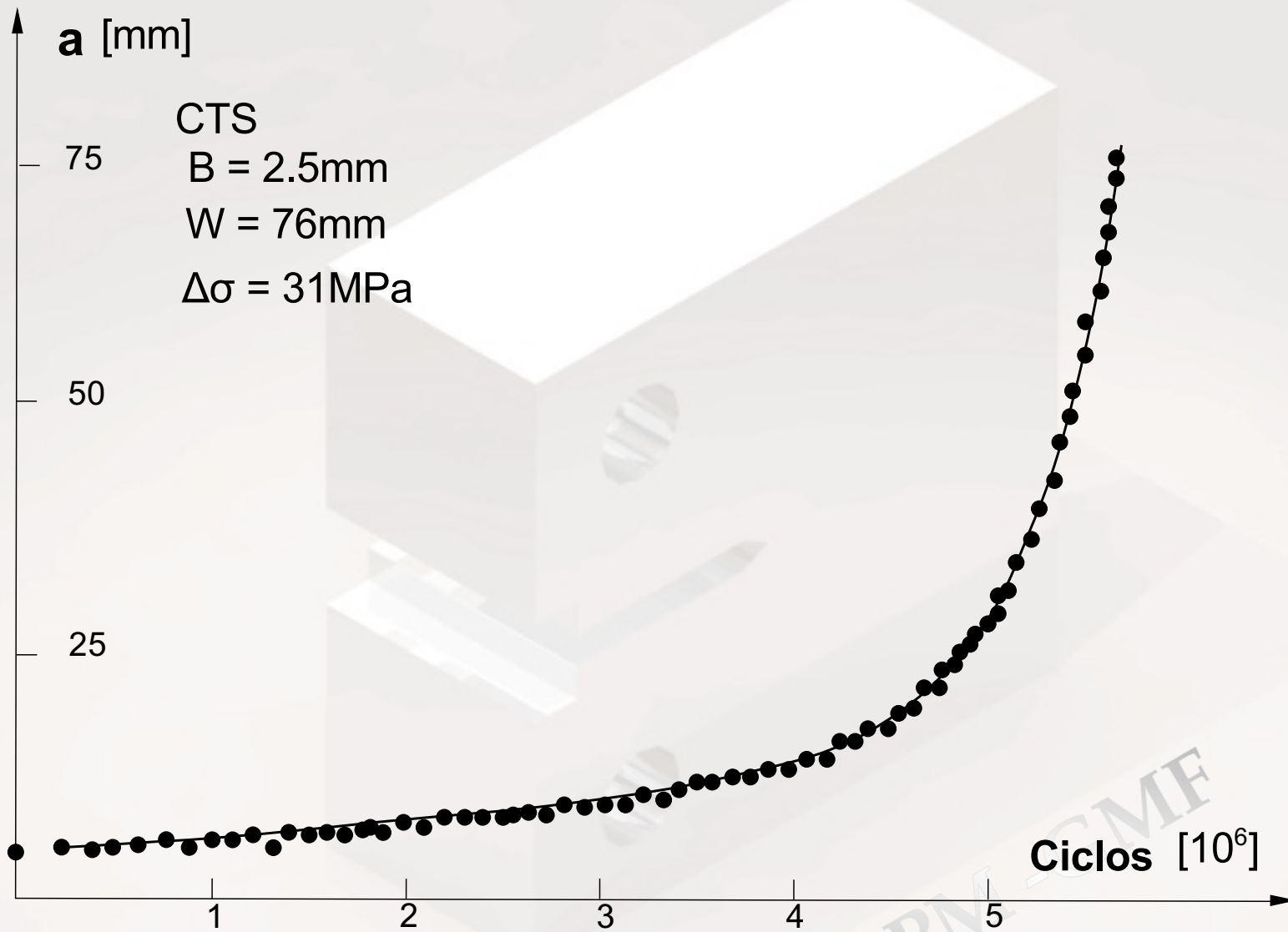
# Ley de Paris

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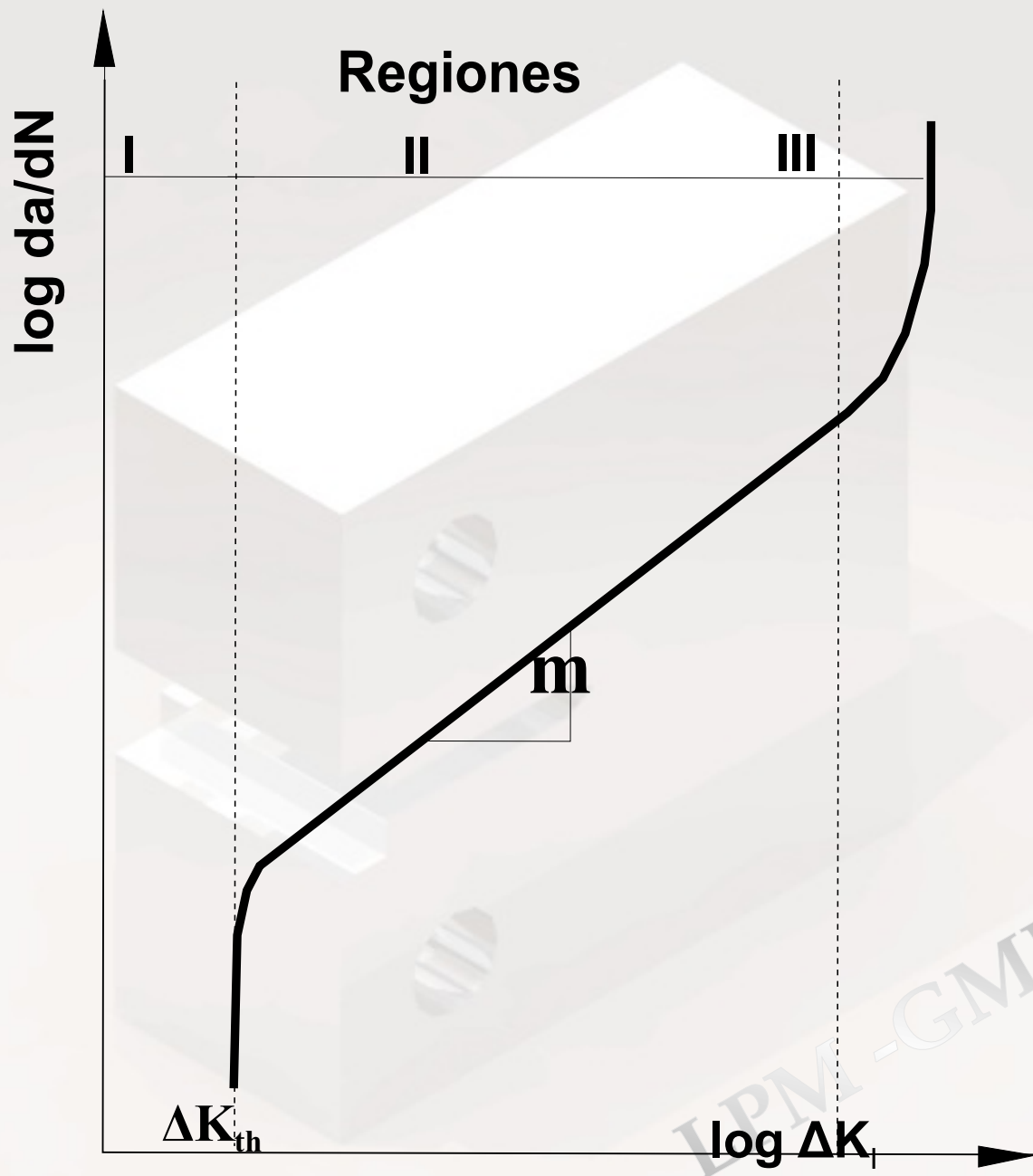
$$da/dn = C \Delta K^m$$

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# Predicción de la vida remanente de un componente

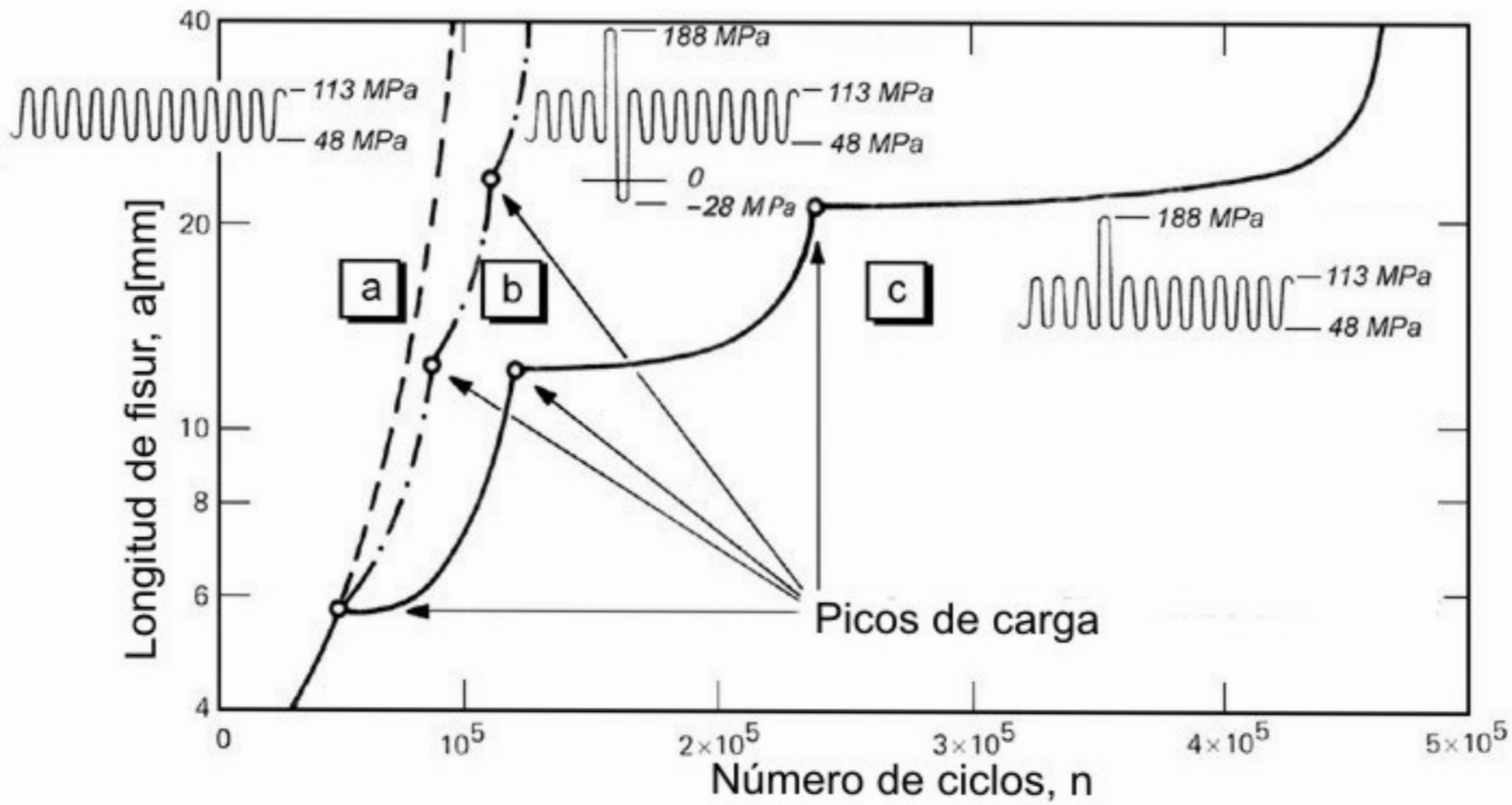
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$$N = \int \frac{1}{(C \Delta K^m)} da$$

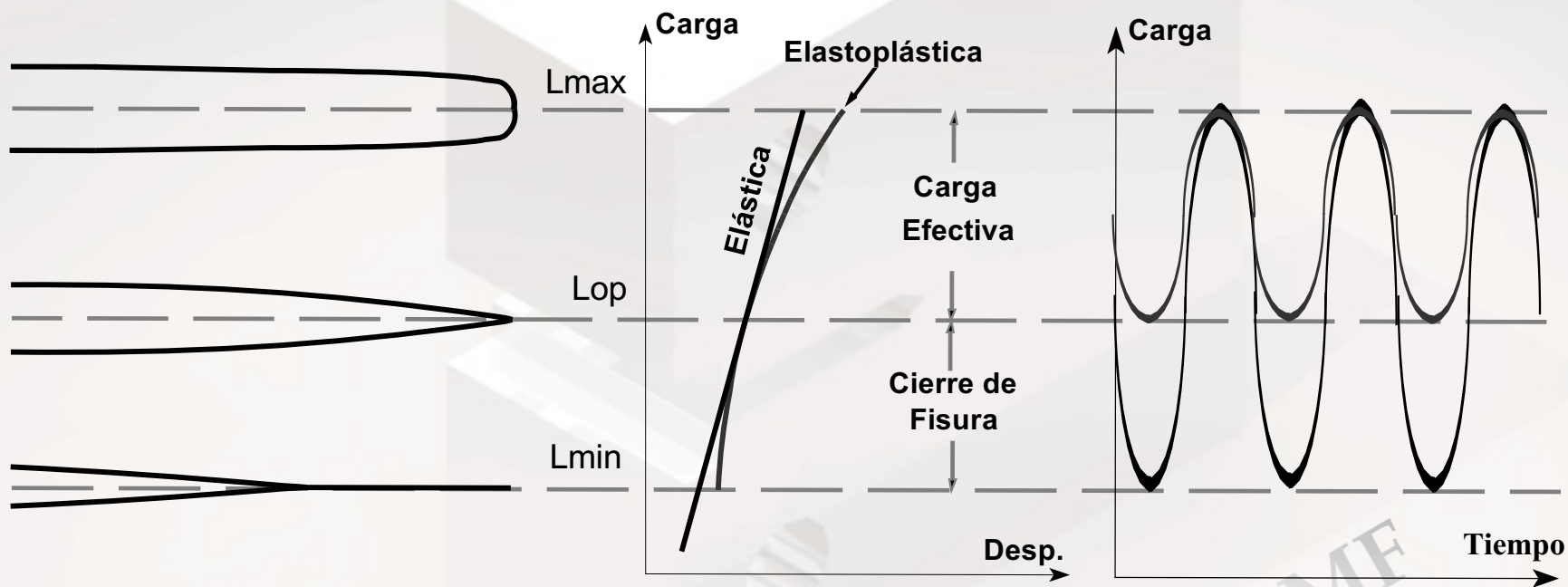
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# Efectos de sobrecargas en la velocidad de crecimiento

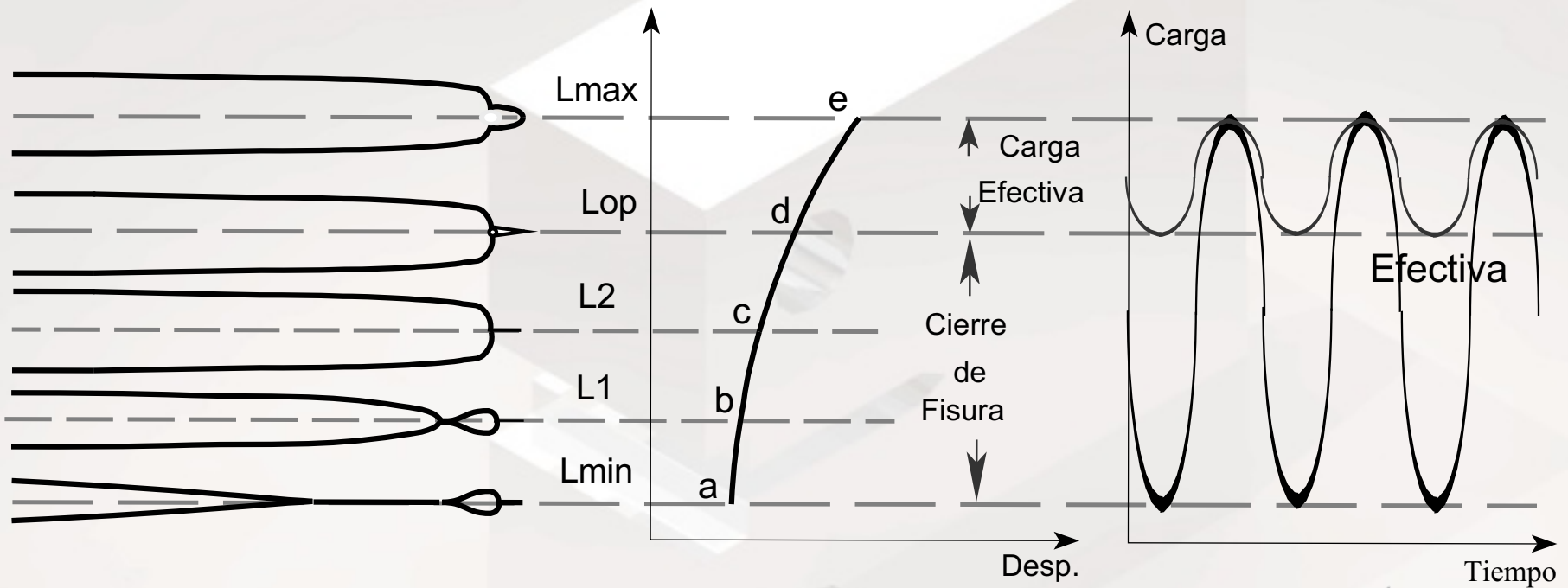


# Modelo de Elber Crack Closure. $\Delta K_{eff}$



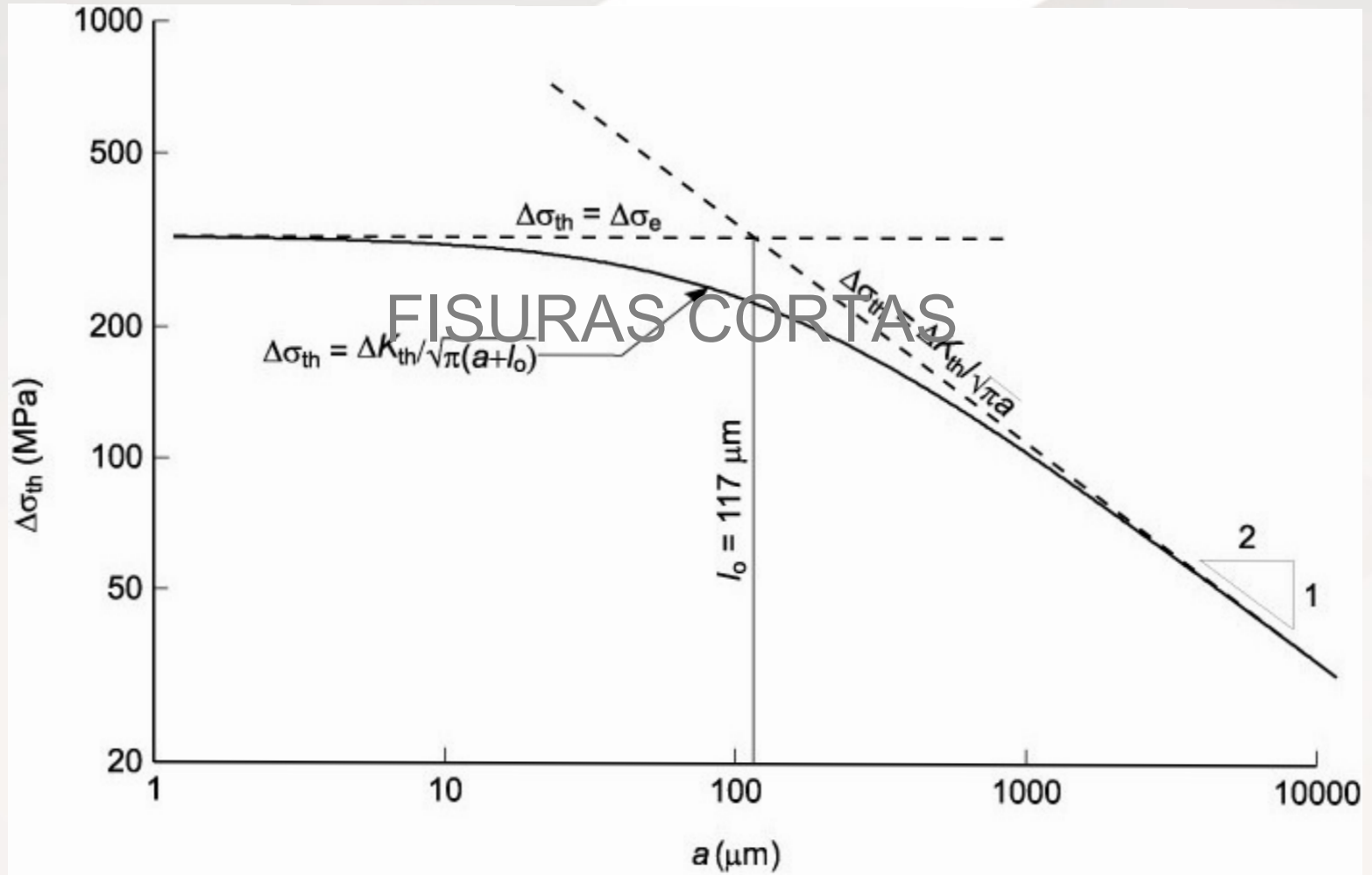
LPM-GMF

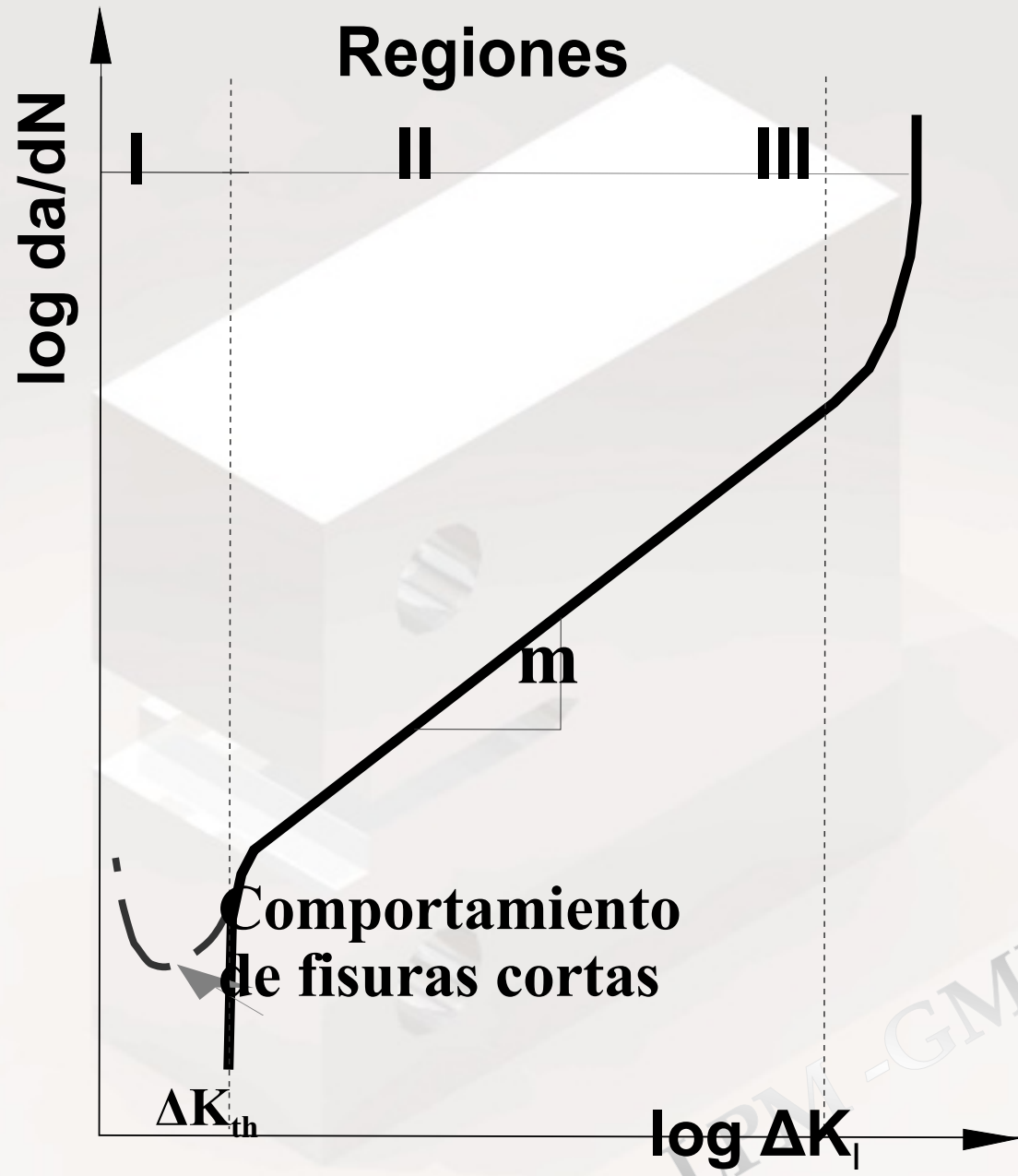
# $\Delta K_{\text{eff}}$ después de una sobrecarga



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# Fisuras Cortas





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