

Fracture Mechanics of Glass (5)

A typical chart for sub-critical crack growth rate is shown here for fused silica. The dimensions of the crack growth rate (velocity, v) are m/s.

The data may be correlated scientifically by the function

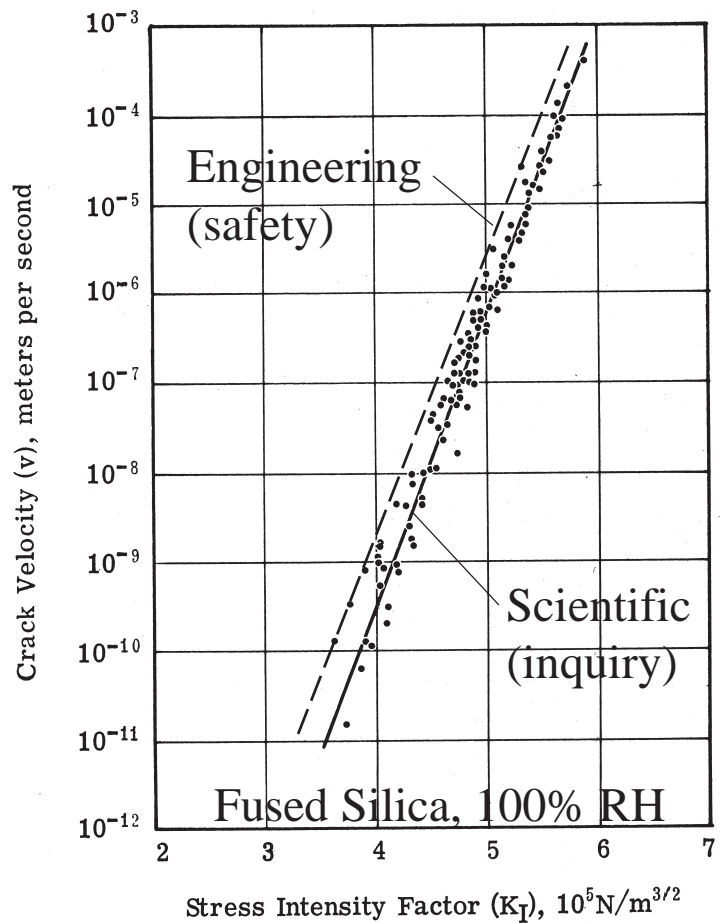
$$K_I = 6.93 + 0.309(\log v).$$

Engineers may prefer to envelope the high velocity side of the data and use a function like

$$K_I = 6.77 + 0.317(\log v)$$

for design.

Note: Units of K_I are $10^5 \text{ N/m}^{3/2}$.



AEH.

Optomechanics