Figure 1: Co-Ordinate System

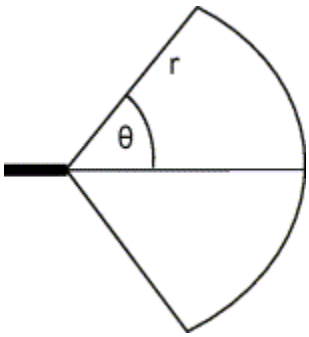

Figure 2: Calculation Regions

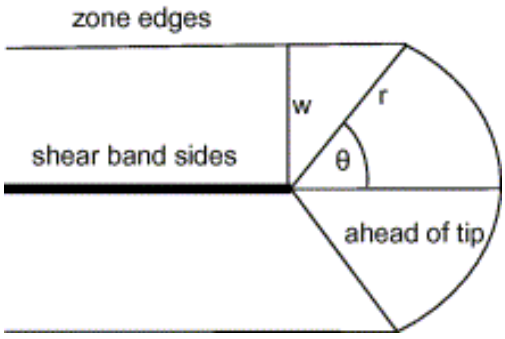

Figure 3. Contribution to toughening

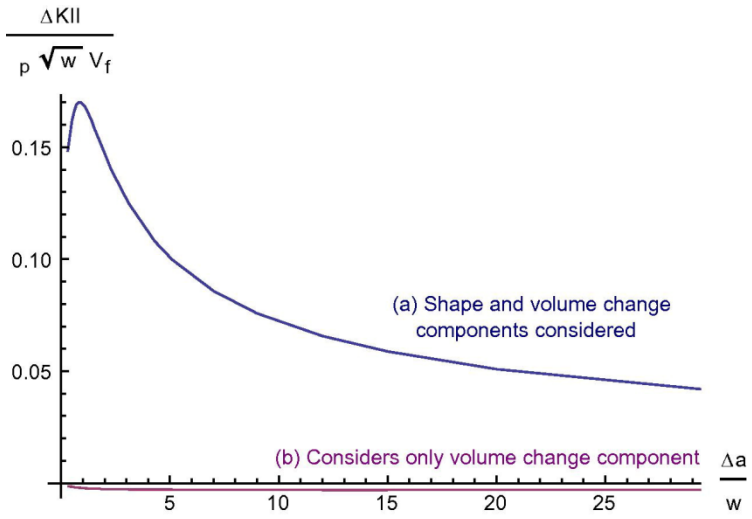

Table 1: Materials Properties for $Cu_{47.5}Zr_{47.5}Al_5$

Poisson's Ratio	Ep/Gpa	Em/Gpa	ΔG/J mol^{-1}	eT	eS
0.373 [12]	82 [12]	82 [12]	2.702*T-1408.52 [13]	0.00137 [5]	0.124 [5]

Values are evaluated for T=298K and with a sample initial stress intensity factor of 5MPa m1/2.

Table 2: Stress Intensity Factor Change with Crack Advance

Δw/a	ΔKii/(Ep*Vf*Sqrt[w])	Δw/a	ΔKii/(Ep*Vf*Sqrt[w])
0.3	1.48E-01	1.8	1.52E-01
0.5	1.62E-01	2.3	1.40E-01
0.6	1.66E-01	3.1	1.25E-01
0.7	1.69E-01	4.3	1.08E-01
0.8	1.70E-01	5.1	9.98E-02
0.9	1.70E-01	7	8.58E-02
1	1.69E-01	9	7.58E-02
1.1	1.68E-01	12	6.57E-02
1.2	1.66E-01	15	5.88E-02
1.3	1.64E-01	20	5.09E-02
1.4	1.62E-01	30	4.14E-02
1.5	1.59E-01	50	3.19E-02