

Paris parameter: $C=1.32e-11$ m/cycles, $m=3.54$ [1,2];

Fracture toughness is assumed to be no less than

$$K_{Ic} = 150 \text{ MPa}\sqrt{\text{m}}$$

Walker's coef: 0.8.

Based on $C=1.32e-11$ and $m=3.54$

$C=1.32e-11$

$m=3.54$

1.32e-													
No Safety Factor													
Crack Area	c	m	k1c	wm	Width	Thickness	b/a	b	peak1	r	num of Peaks	nlife	
0.125	1.52E-12	4.347	150	0.8	0.03	0.0077	1	0.000354	145	0	1	971659	433569
0.25	1.52E-12	4.347	150	0.8	0.03	0.0077	1	0.0005	145	0	1	640022	
0.5	1.52E-12	4.347	150	0.8	0.03	0.0077	1	0.000707	145	0	1	418834	
1	1.52E-12	4.347	150	0.8	0.03	0.0077	1	0.001	145	0	1	270882	

With Safety Factor of 2 on crack and 1.5 on Fracture Toughness													
$C=1.32e-11$													
$m=3.54$													
Crack Area	c	m	k1c	wm	Width	Thickness	b/a	b	peak1	r	num of Peaks	nlife	
0.125	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.000707	145	0	1	418334	240610
0.25	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001	145	0	1	270882	176448
0.5	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001414	145	0	1	173083	127483
1	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.002	145	0	1	108323	
0.125	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.000707	100	0	1	2103380	896579
0.25	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001	100	0	1	1363689	657435
0.5	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001414	100	0	1	870333	475021
1	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.002	100	0	1	544790	
0.125	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.000707	50	0	1		
0.25	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001	50	0	1		
0.5	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001414	50	0	1	15732952	
1	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.002	50	0	1	10567053	
0.125	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.000707	200	0	1	103380	77075
0.25	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001	200	0	1	66937	56521
0.5	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001414	200	0	1	42770	40837
1	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.002	200	0	1		
0.125	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.000707	250	0	1	39190	34983
0.25	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001	250	0	1	25375	
0.5	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.001414	250	0	1	16214	
1	1.52E-12	4.347	100	0.8	0.03	0.0077	1	0.002	250	0	1		