

## APPENDIX A

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#### The Effect of Crack Position and Applied Force on Fatigue Delamination Behavior of GFRP's in Mixed Mode Test

Abdalla H. Alkaood<sup>1\*</sup>, Abdelhamid I. Gomma<sup>2</sup>, Ibrahim. M. El Fahham<sup>2</sup>, Yasser. S. Mohamed<sup>2</sup>

<sup>1\*,2</sup> Department of Mechanical Engineering, Alexandria University, Faculty of Engineering, Alexandria, Egypt.

<sup>1\*</sup>Corresponding Author's: Tel: 002/045/2862040-Mobile. 002/01220178495 – Postal code 22774 Elbohera governorate-Egypt;

E-mail address : [abdallaalkaood@yahoo.com](mailto:abdallaalkaood@yahoo.com) , [abdallaalkaood@alexu.edu.eg](mailto:abdallaalkaood@alexu.edu.eg)

The following figures show that, the  $2a_c-N$  fatigue curves, illustrated from figure 1 to figure 12 in supplementary data appendix A

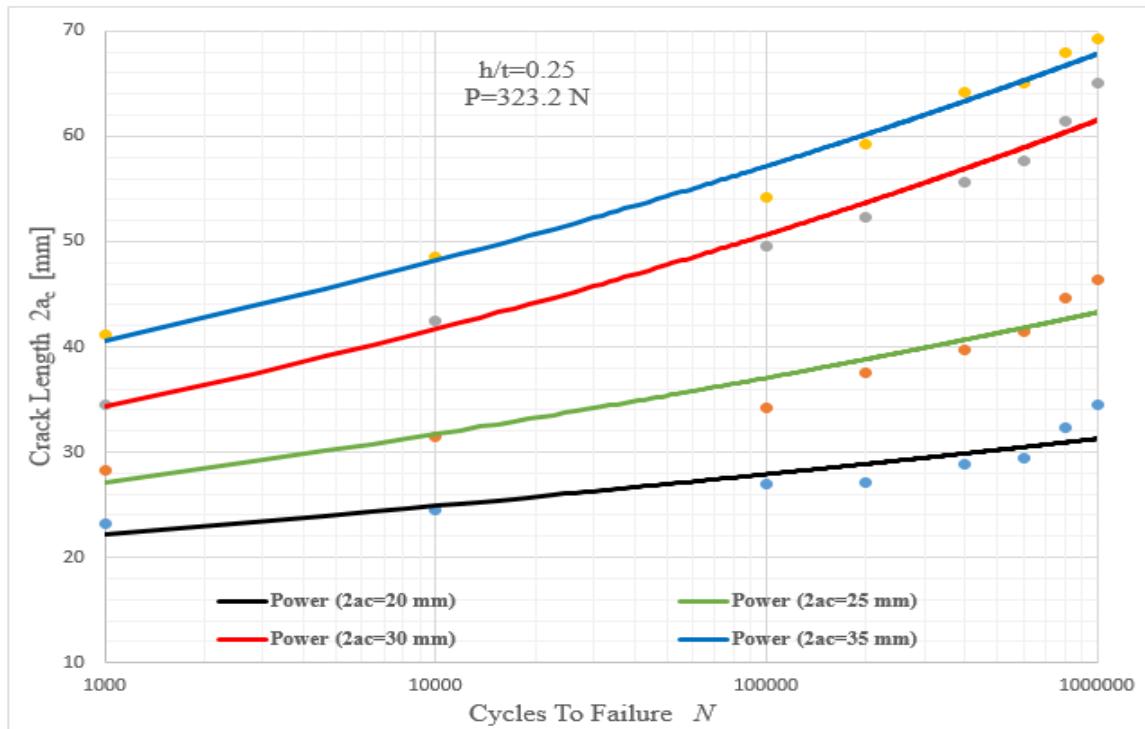


Figure 1  $2a_c-N$  curve for  $h/t=0.25$  at  $P= 323.2 \text{ N}$

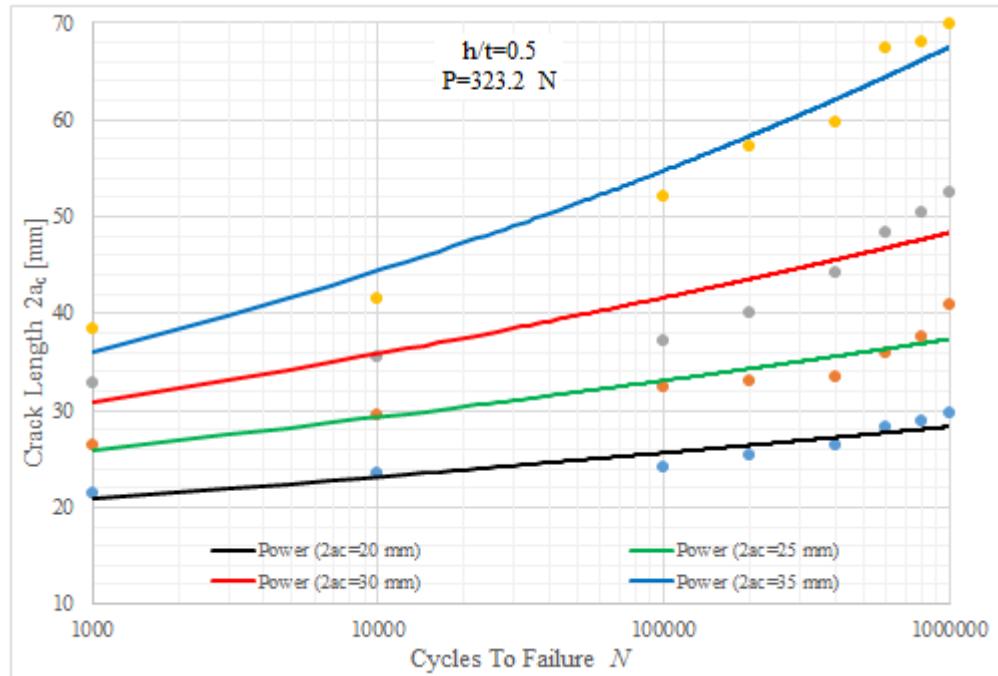


Figure 2  $2a_c$ - $N$  curve for  $h/t=0.5$  at  $P= 323.2$  N

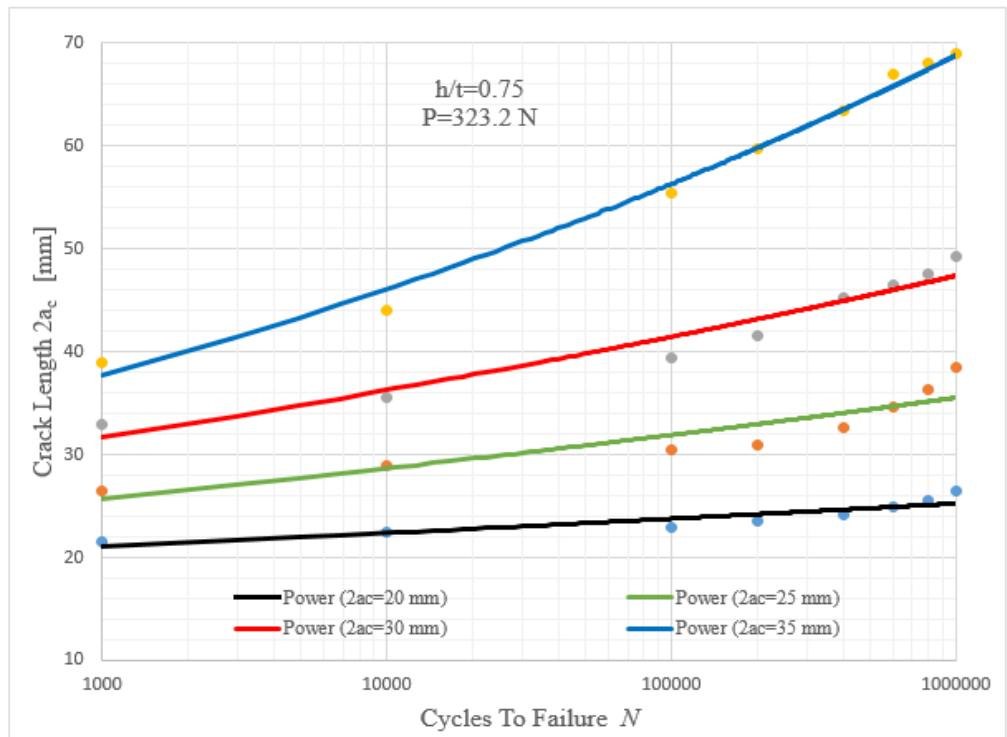


Figure 3  $2a_c$ - $N$  curve for  $h/t=0.75$  at  $P=323.2$  N

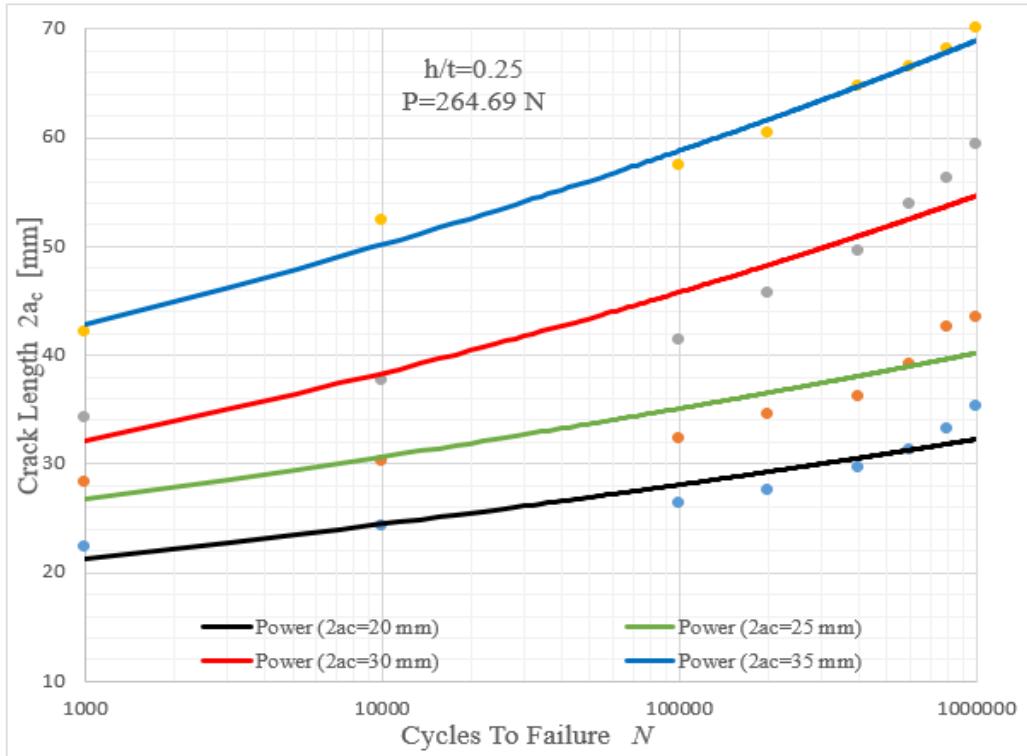


Figure 4  $2a_c$ - $N$  curve for  $h/t=0.25$  at  $P=264.69$  N

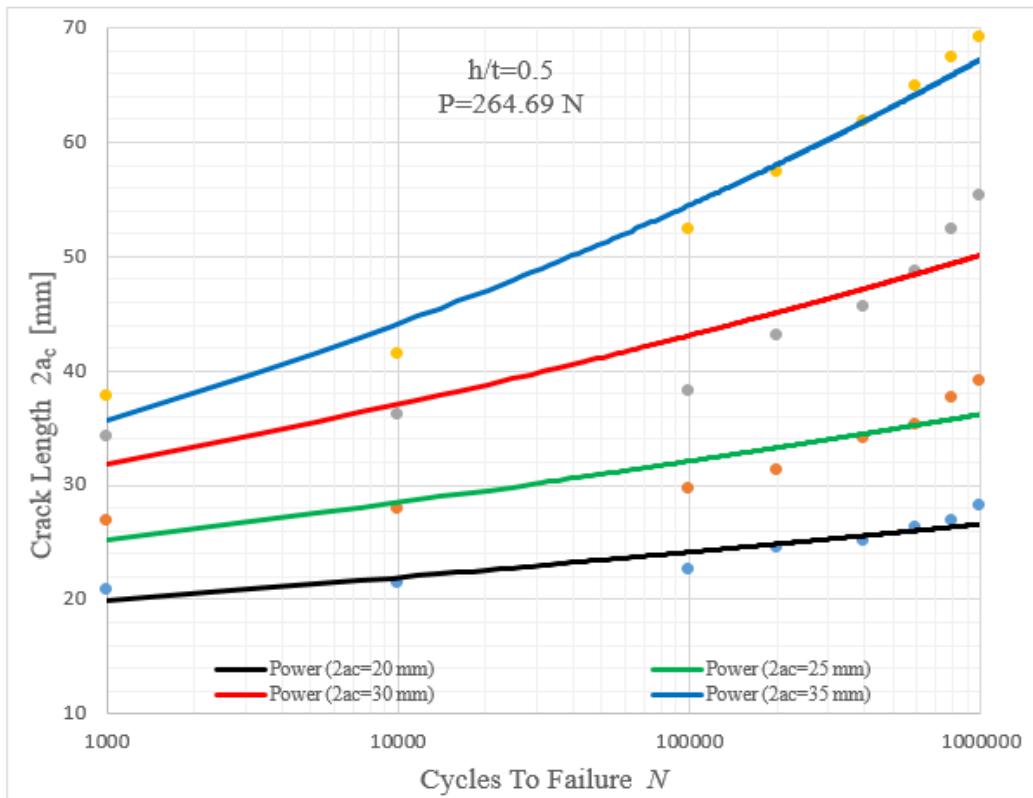


Figure 5  $2a_c$ - $N$  curve for  $h/t= 0.5$  at  $P=264.69$  N

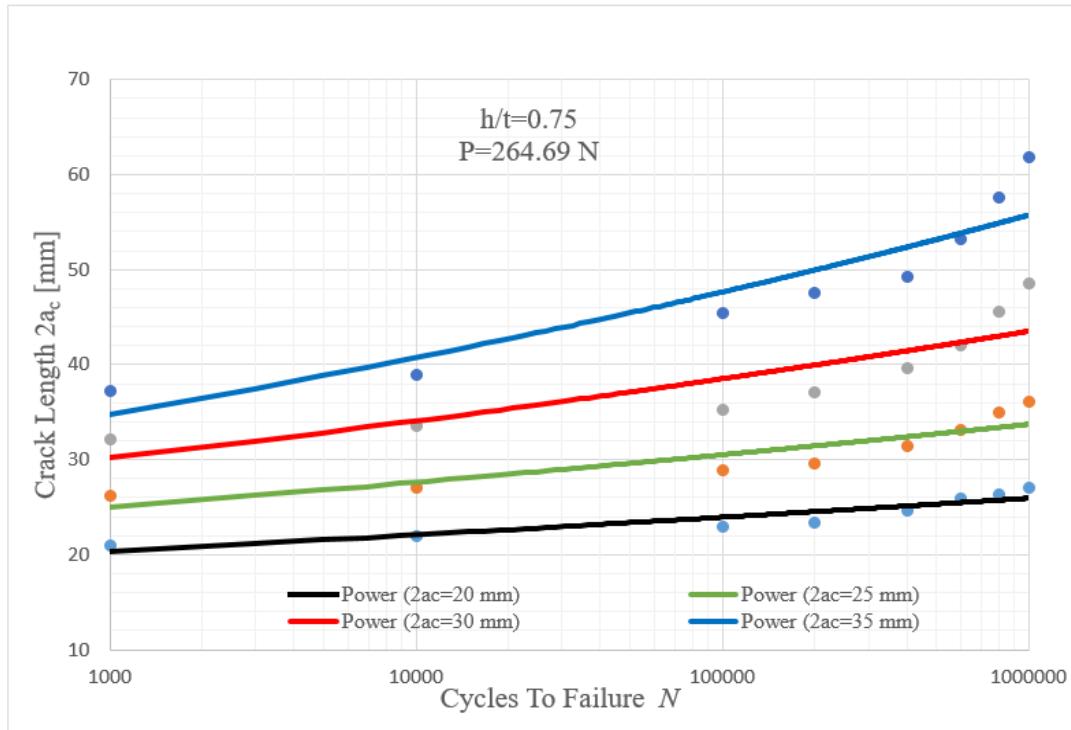


Figure 6  $2a_c$ - $N$  curve for  $h/t=0.75$  at  $P=264.69$  N

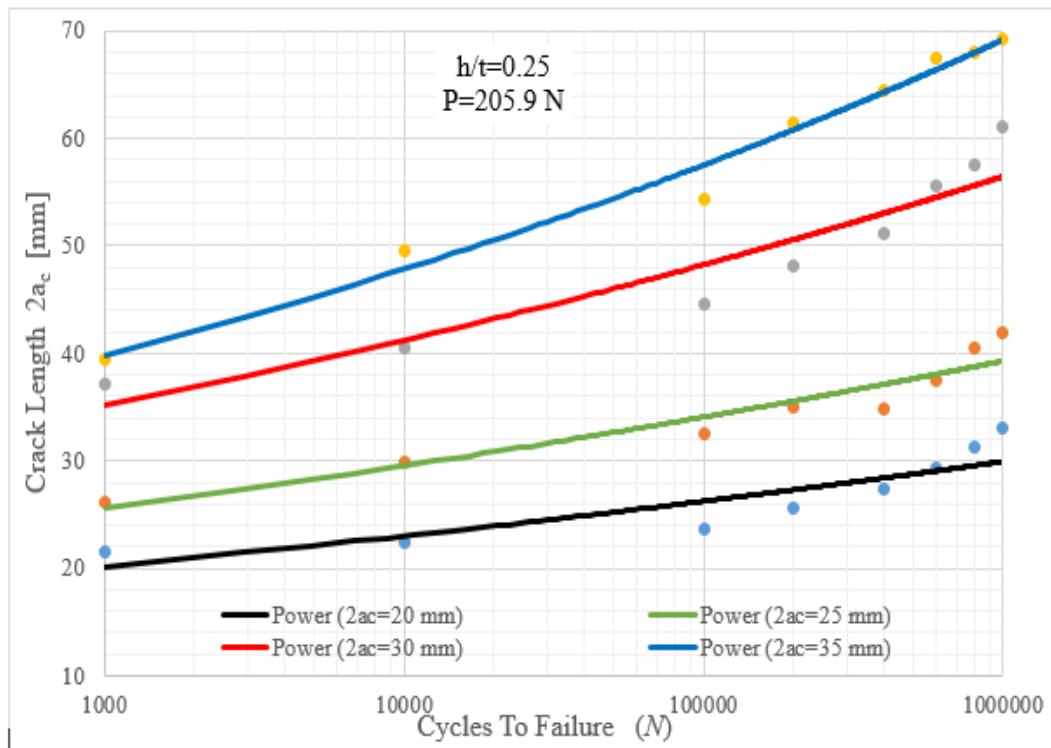


Figure 7  $2a_c$  - $N$  curve for  $h/ t=0.25$  at  $P=205.5$  N

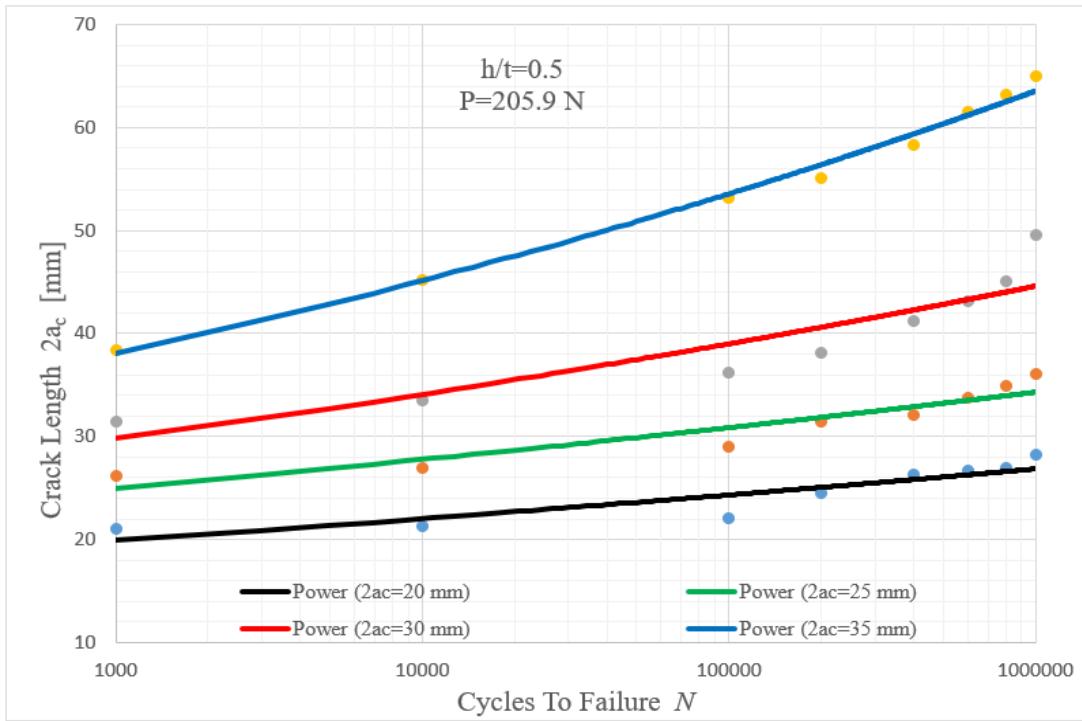


Figure 8  $2a_c$ - $N$  curve for  $h/t = 0.5$  at  $P = 205.5$  N

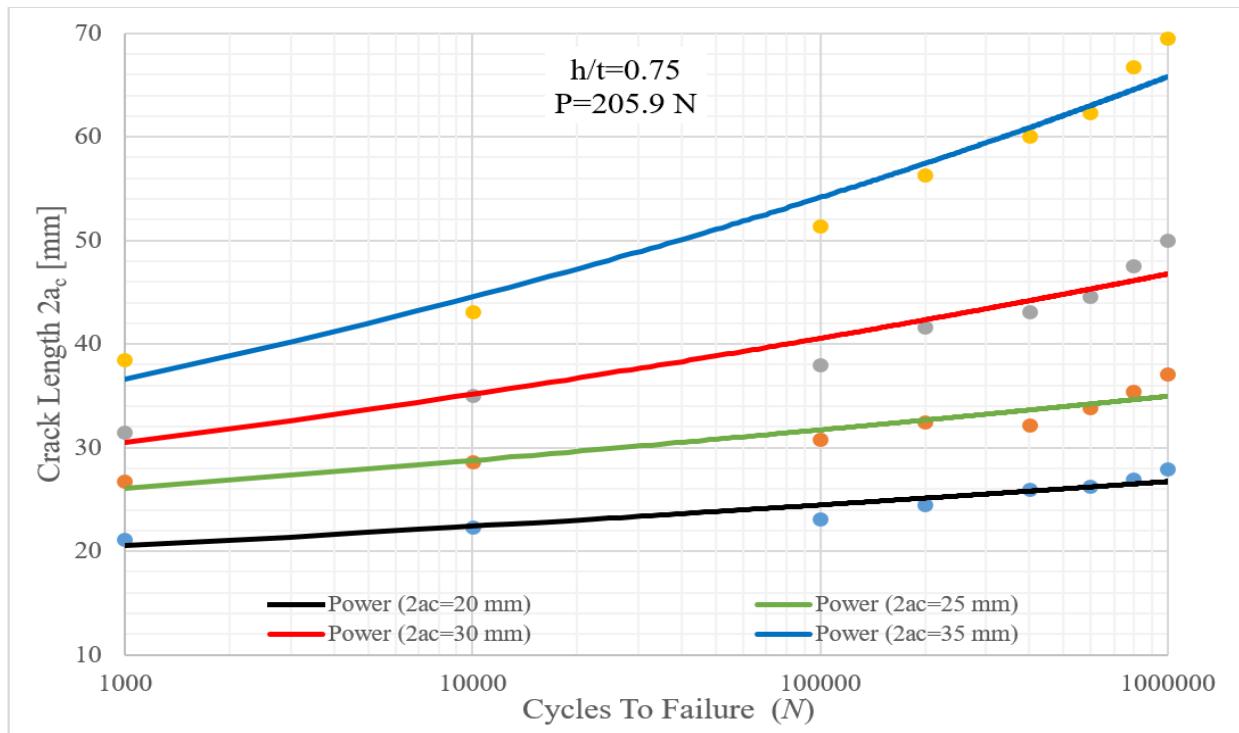


Figure 9  $2a_c$ - $N$  curve for  $h/t = 0.75$  at  $P = 205.5$  N

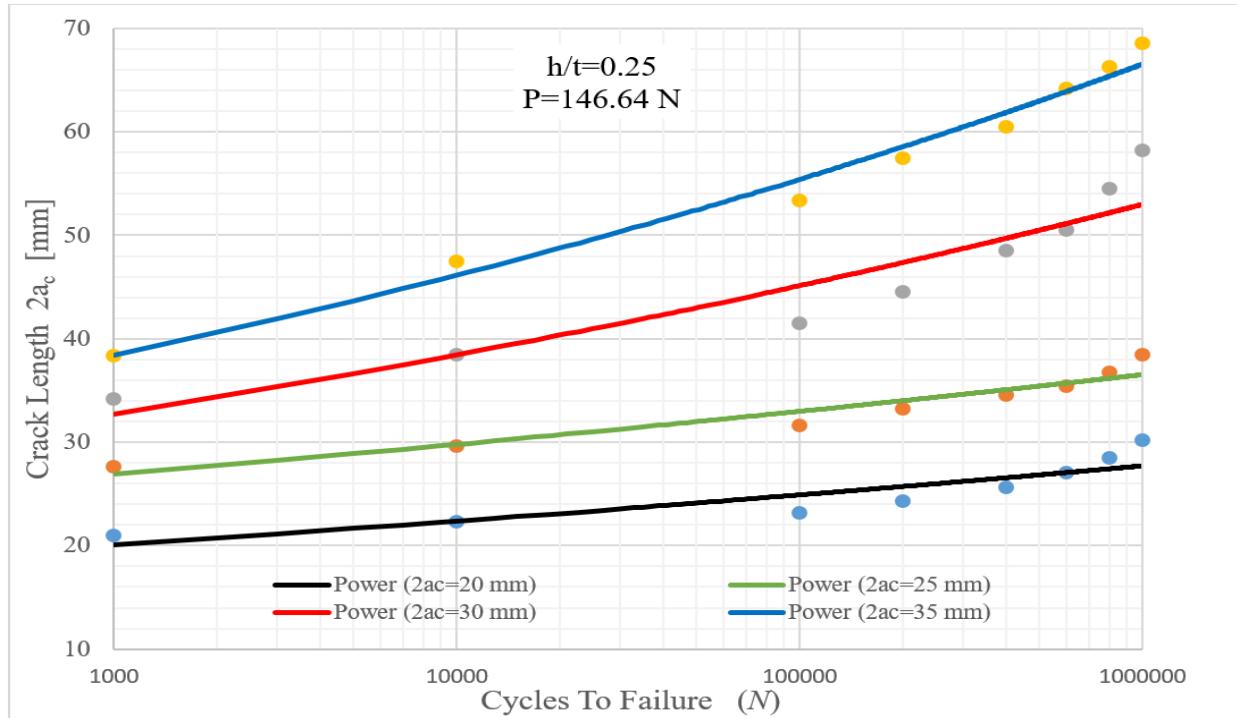


Figure 10  $2a_c$ - $N$  curve for  $h/t = 0.25$  at  $P = 146.64$  N

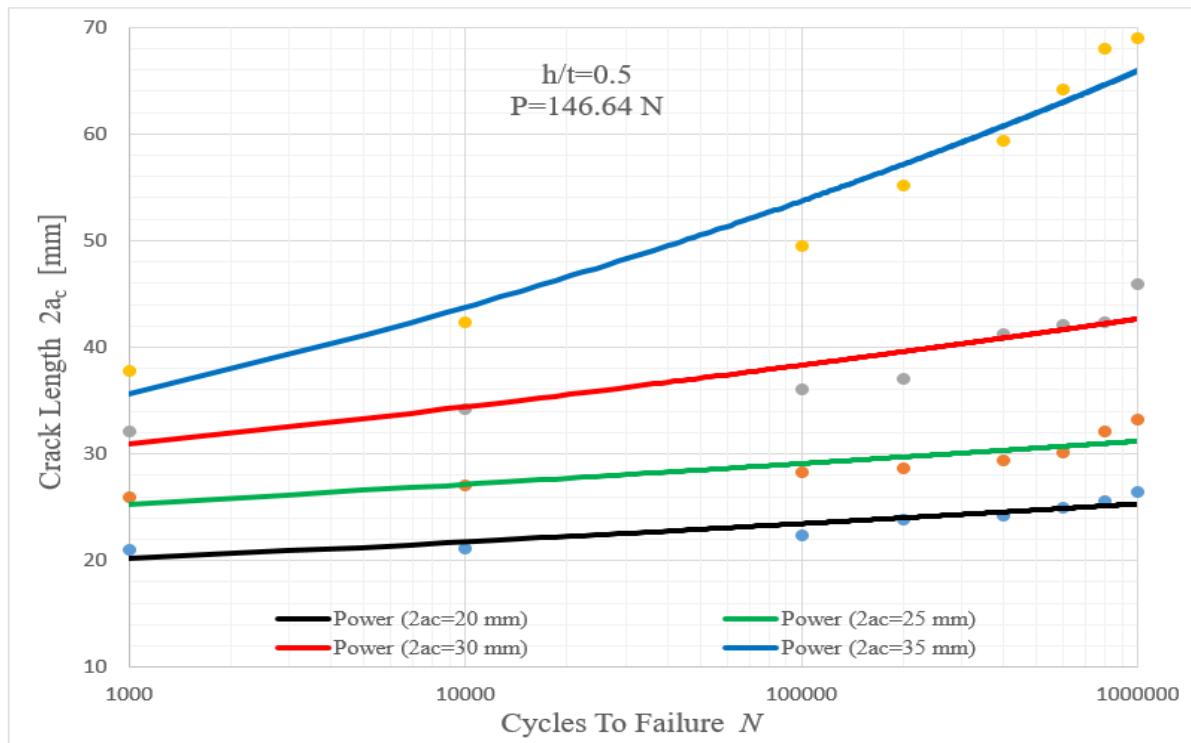


Figure 11  $2a_c$  - $N$  curve for  $h/t=0.5$  at  $P=146.64$  N

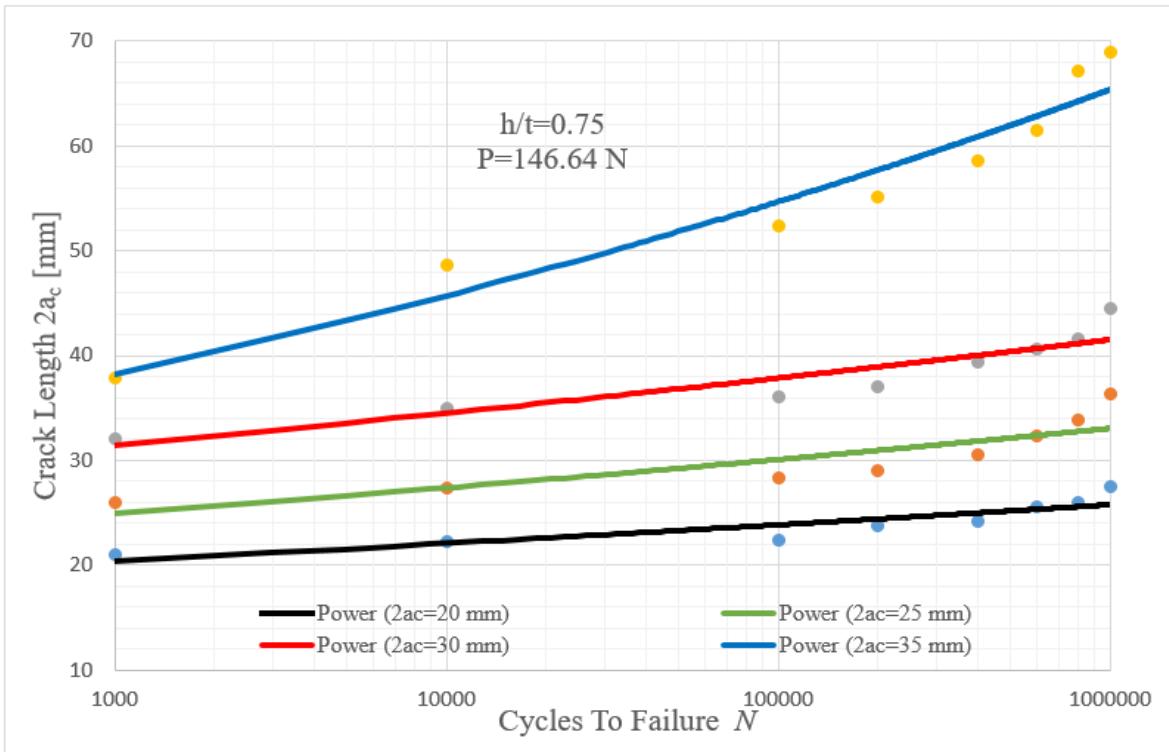


Figure 12  $2a_c$ - $N$ curve for  $h/t=0.75$  at  $P=146.64$  N