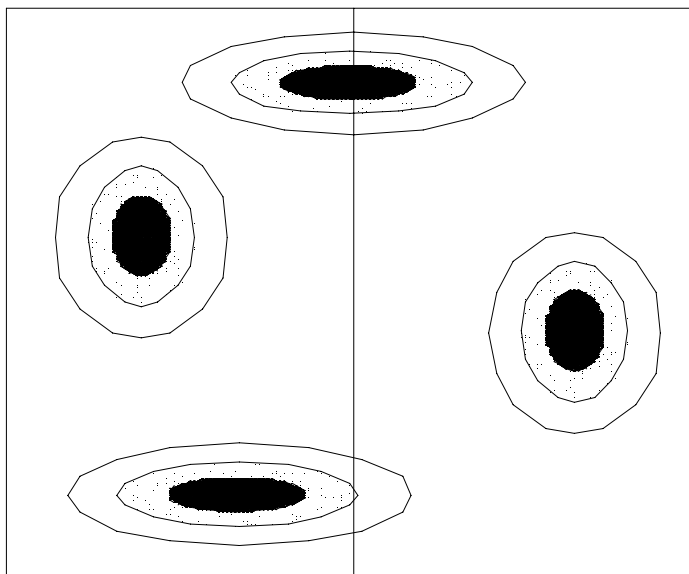


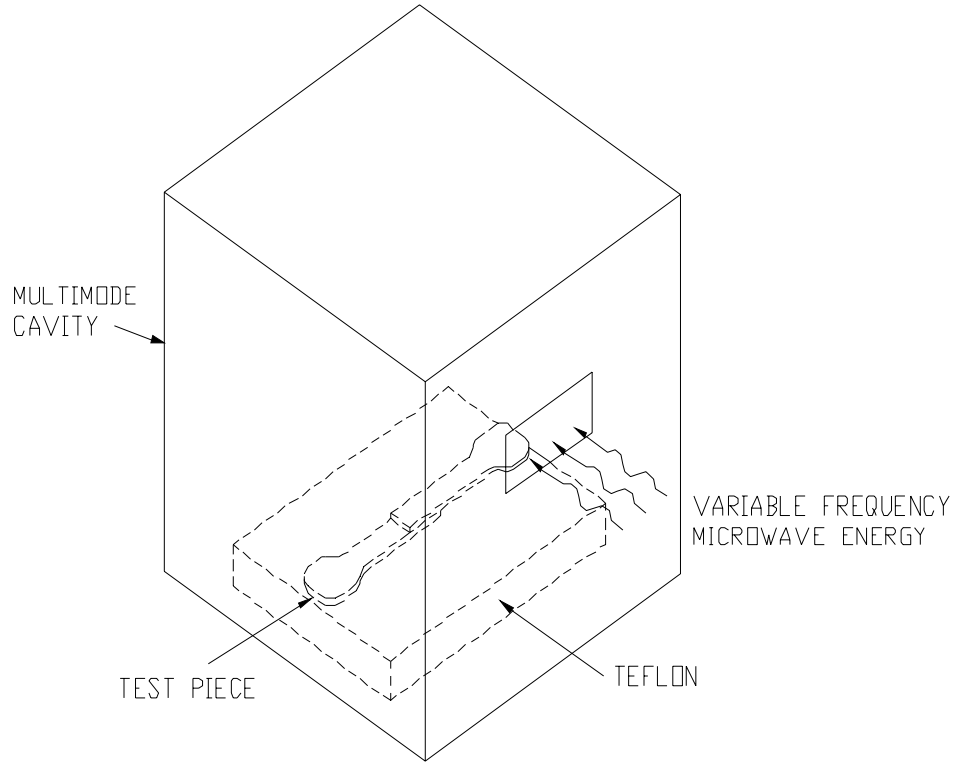
a) 2.45 GHz Microwave Energy Launched into a Single Mode Applicator



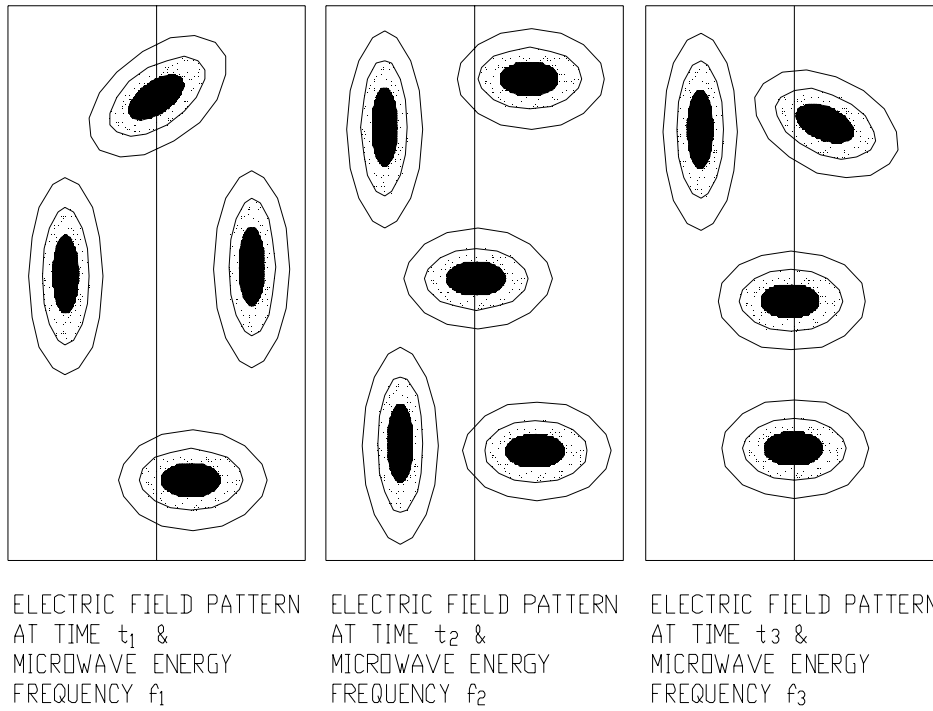
ELECTRIC FIELD PATTERN AT
ALL TIMES WITH FIXED FREQUENCY
MICROWAVE ENERGY

b) Electric Field Pattern for (a)

Figure 1: Fixed Frequency Microwave Heating – Nonuniform Heating



a) Variable Frequency Microwave Energy Launched into Multi Mode Cavity



b) Electric Field Pattern at Different Times in (a)

Figure 2: Variable Frequency Microwave Heating – Time-Averaged Uniform Heating

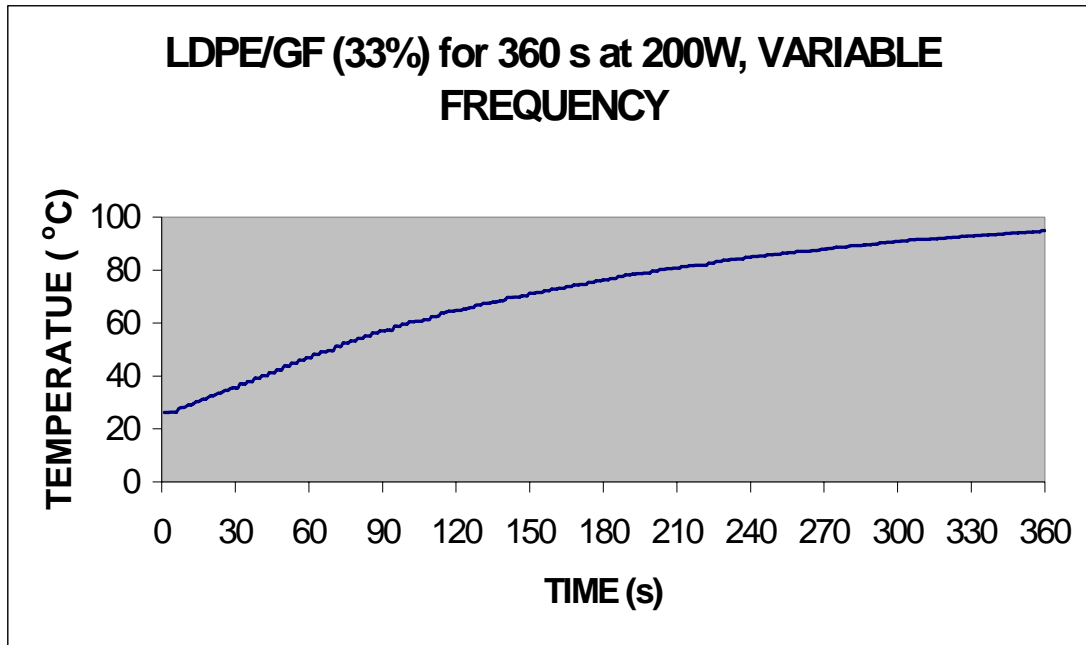


Figure 3: Temperature versus Time for LDPE/GF (33%)

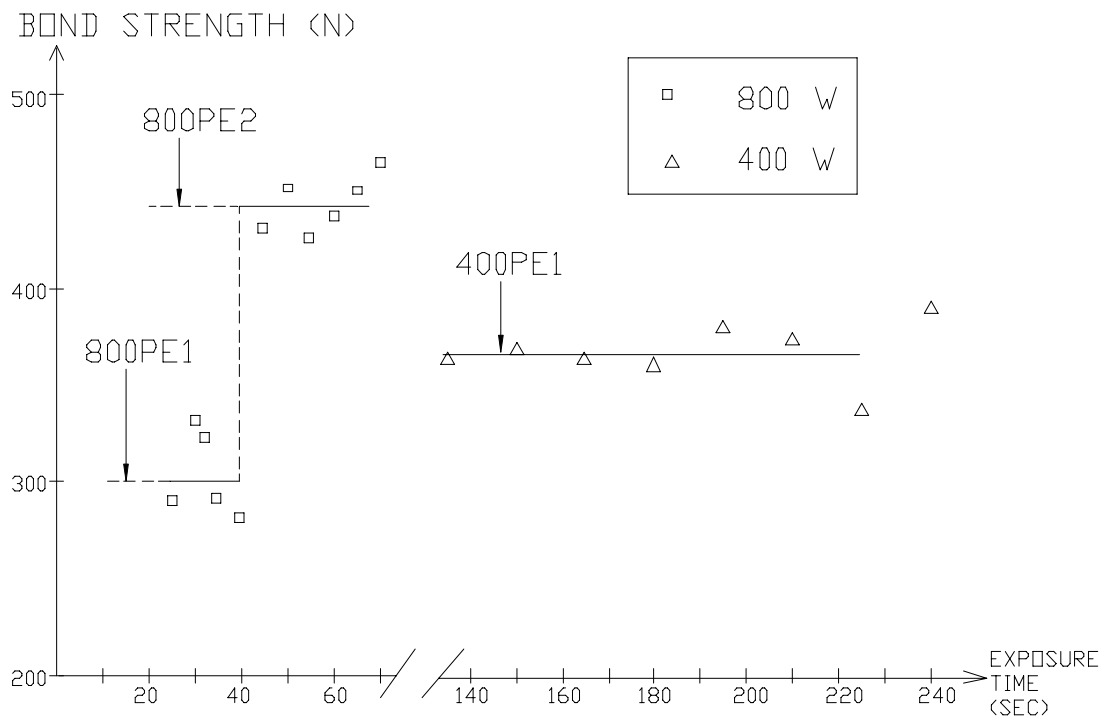


Figure 4: Bond Strengths of LDPE/GF (33%) and Five Minute Two Part Adhesive at 2.45 GHz

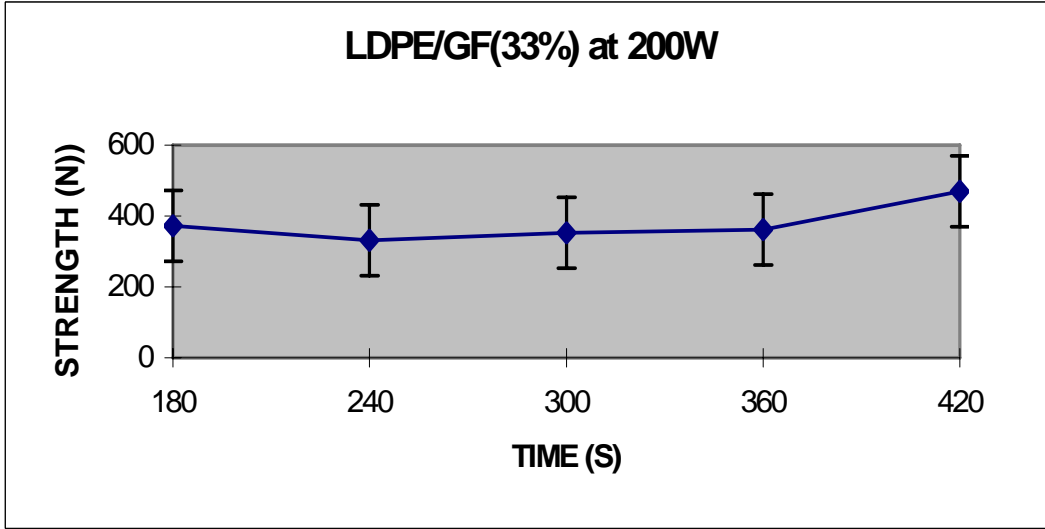


Figure 5: Bond Strength of LDPE/GF (33%) with Araldite Using Variable Microwave Frequency

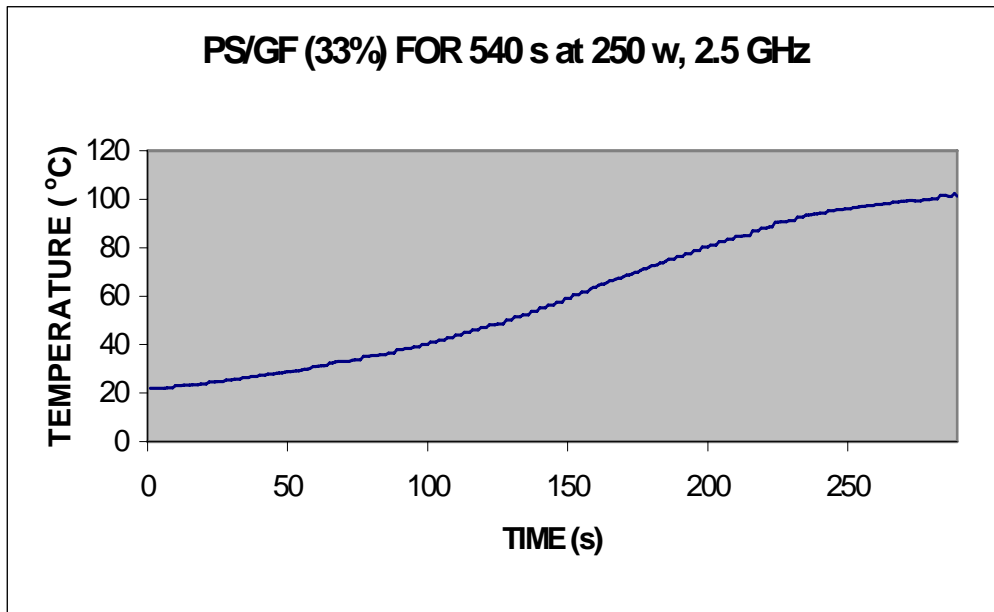


Figure 6: Temperature versus Time for PS/GF (33%) at 200 W

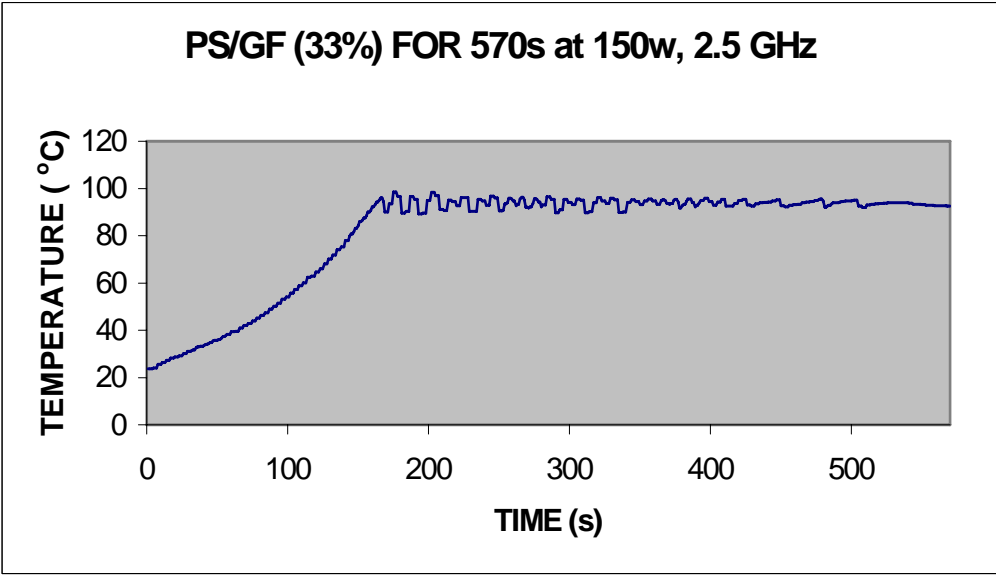


Figure 7: Temperature versus Time for PS/GF (33%) at 150 W using fixed Microwave Frequency

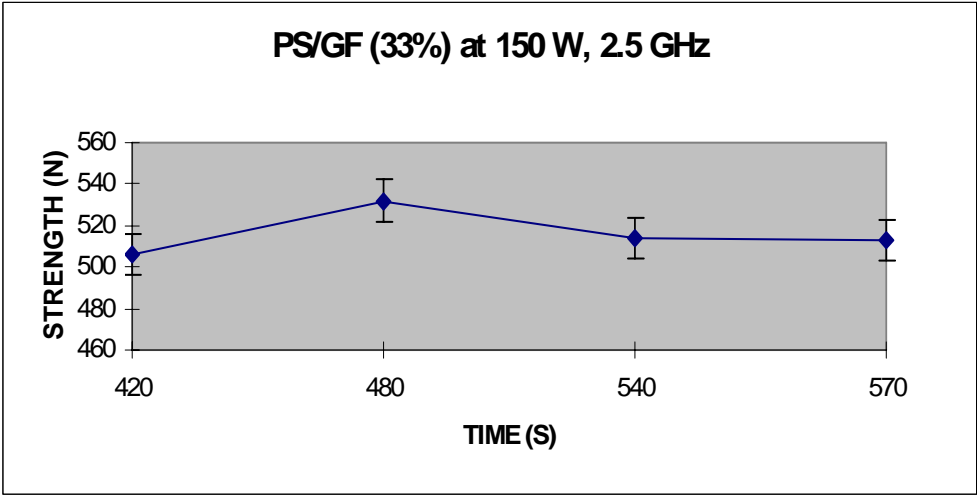


Figure 8: Bond Strength of PS/GF (33%) with Araldite Using Fixed Microwave Frequency

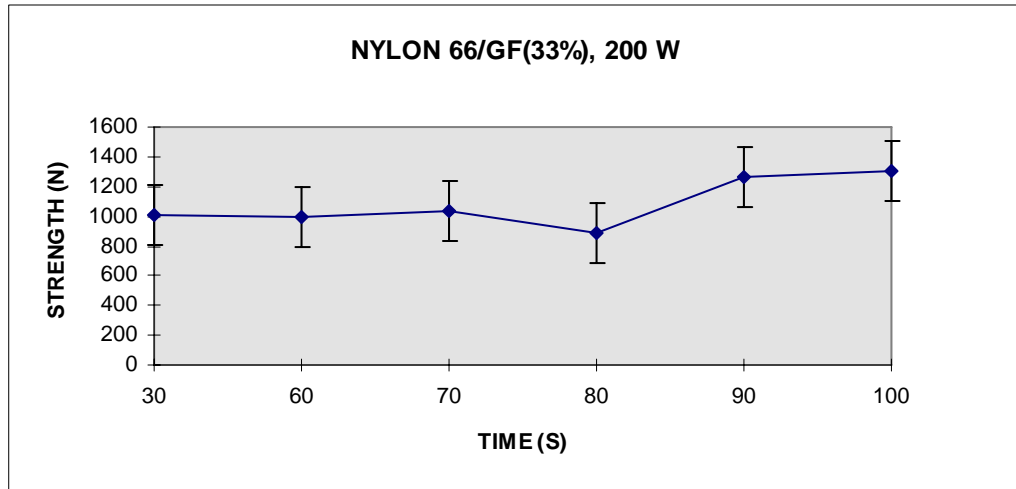


Figure 9: Bond Strength of Nylon 66/GF (33%) with Araldite Using Variable Microwave Frequency

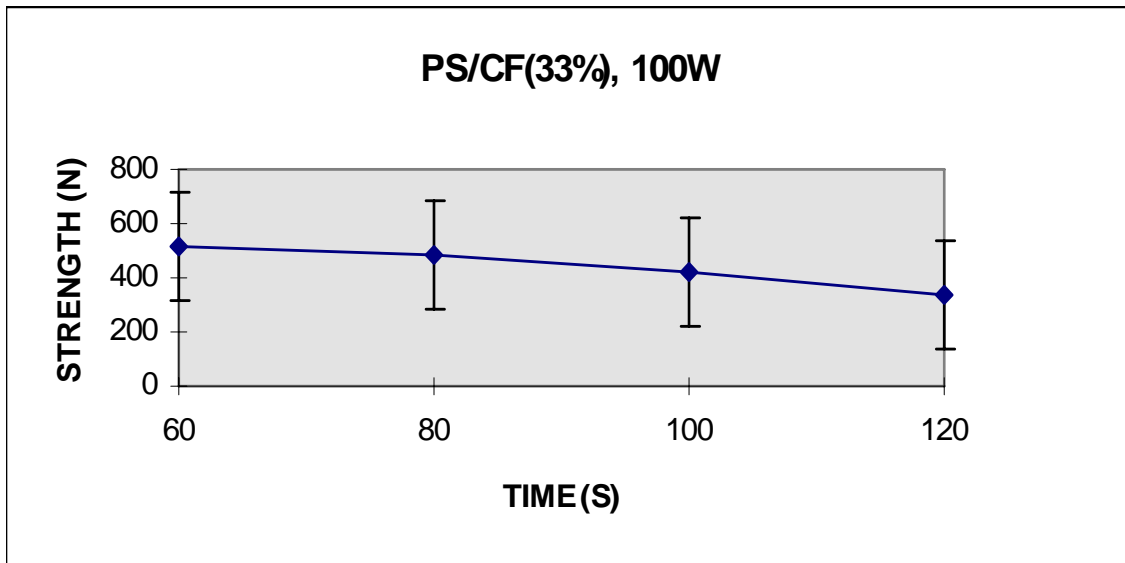


Figure 10: Bond Strength of PS/CF (33%) with No Primer Using Variable Microwave Frequency

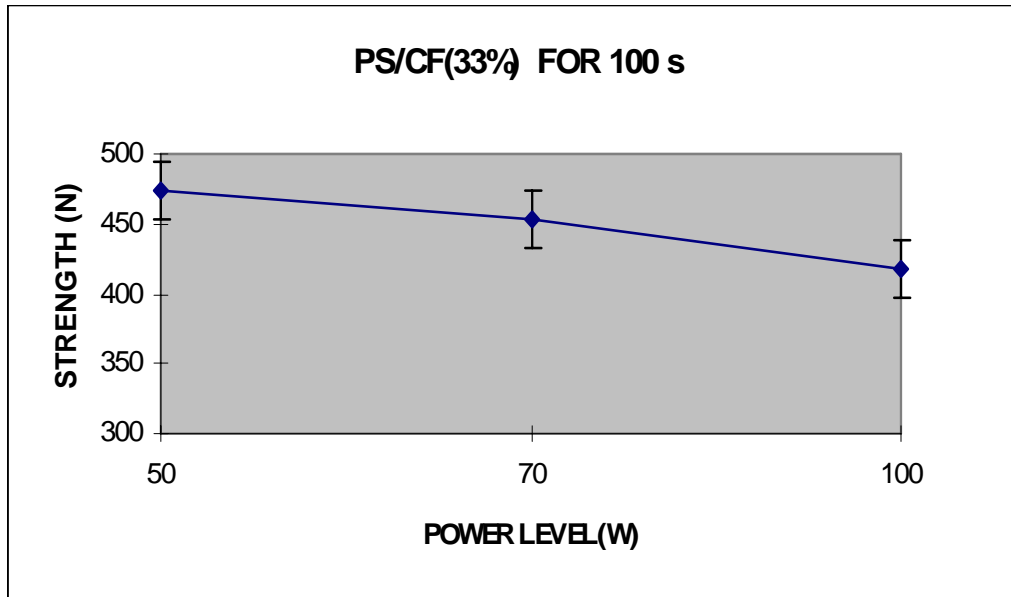


Figure 11: Bond Strength of PS/CF (33%) Using Variable Microwave Frequency and Different Power Levels

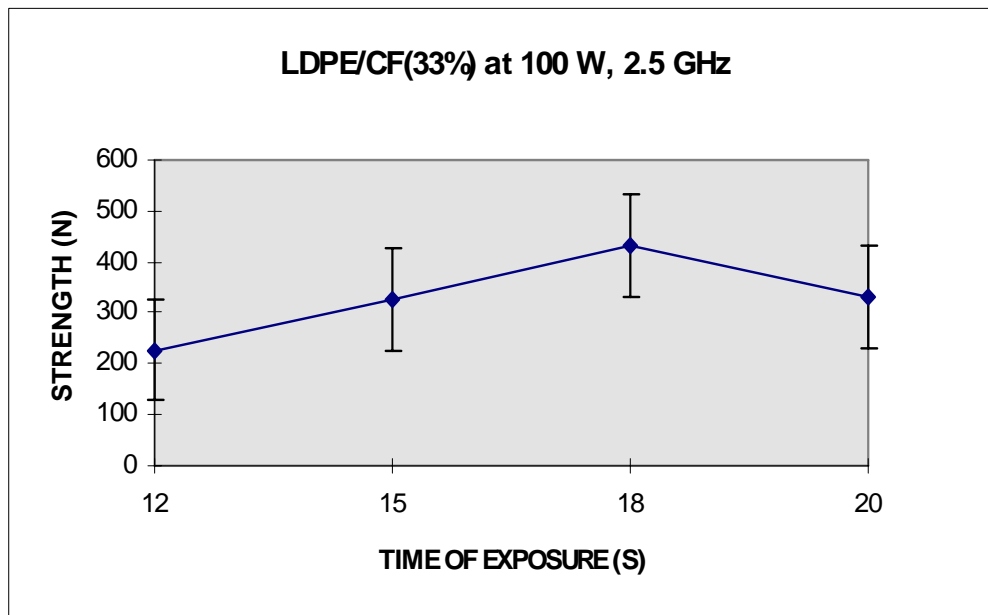


Figure 12: Bond Strength of LDPE/CF (33%) with No Primer Using Fixed Microwave Frequency