• PTI Pulstar 804 pultruder with enhanced pull speed (120”/min) and pull and clamp pressure capacity (10,000 lbs); data acquisition of all process conditions
• McLean Anderson Little Hornet computer controlled filament winder capable of parts up to 24” in diameter and 40” in length
• MTS 110, 22, and 5 kip fatigue-rated material test systems with TestStar and TestWorks control and acquisition packages along with fixtures for standard mechanical property tests including tension, compression, flex (3 and 4 point), short-beam shear, Iosipescu shear, and fatigue and temperature chamber
• Tinius Olsen 10,000 in-lb torsion machine with computer control and analysis
• HP modal and spectrum analysis equipment for dynamic property evaluation
• TA dynamic mechanical analyzer (DMA)
• Dynatup 8250 HV instrumented impact test system with temperature chamber
• Photoelastic analysis system
• TA modulated differential scanning calorimeter to measure thermal conductivity, heat capacity, and standard DSC parameters
• TA modulated thermogravimetric analysis system for measurement of weight change as a function of temperature and decomposition kinetics
• Rheometrics AHRES rheometer for studying the rheological characteristics of polymers/composites
• Temperature controlled Brookfield viscometer
• Nikon optical microscopes with image analysis and mounting/polishing equipment
• JEOL 6100 SEM with Oxford-Link EDS and image analysis software
• Extensive computer acquisition and analysis equipment connected through a Composite Materials Research Group network to the University supercomputer and the Internet
• Photonetics 1450 fiber optic pressure sensor
• Micromet Instruments Eumetric 100A dielectrometer for measuring degree of cure within a pultrusion die
• Thermotron SE-300-2-2 and SE-600-5-5 temperature and humidity control environmental chambers