Machining of Boron/Epoxy Composites

Boron-epoxy composites can be machined by all standard methods.

- **Drilling**
- **Profile Machining**
- **Grinding**
- **Cutoff**
- **Slitting**

The following conditions are recommended for optimal machining of boron epoxy composites:

❖ All parts should be fully supported to prevent ply delaminating

❖ **Materials**
- Metal-bonded or resin-bonded diamond tooling and cutting wheels are best
- Silicon carbide and alumina wheels can be used

❖ **Coolant**
- Dry cutting is possible, but flooding with water-based coolant extends cutting tool life
- Coolants should be used for grinding to prevent matrix degradation

❖ **Speeds**
- Cutting speeds should range from 1900 to 3100 surface feet per minute
- In-feed rate for cutoff and slitting can be as high as 4 to 6 inches per minute
- Grinding speeds should range from 3000 to 8000 surface feet per minute